JFQ

Issue 51, 4th Quarter 2008

WEAPONS OF MASS DESTRUCTION

U.S. Africa Command

EBO's Bad Conduct Discharge

2008 Essay WINNERS

JOINT FORCE QUARTERLY

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Inside

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ABOUT THE COVERS

Front cover (U.S. GPO/Rebecca J. White): composite of explosion from BGM–109 Tomahawk cruise missile fired from submerged submarine hitting target 400 miles away (U.S. Navy) with hazardous warning symbols representing chemical, biological, radiological, and poison threats. Table of contents (left to right): Commander, U.S. Africa Command, meets candidates at Ugandan Noncommissioned Officer Academy (DOD/Vince Crawley); Sailors stand watch as USS *Normandy* navigates ice field in Arctic Circle (U.S. Navy/Ryan Birkelbach); Marine uses mounted data automated communications terminal to connect to enhanced position locating system (U.S. Marine Corps); and B–2 with two F–15s over Pacific Ocean (U.S. Air Force/Cecilio Ricardo). Back cover (top to bottom): Airmen secure Mine-Resistant Ambush Vehicle inside C–17 for transportation to Marines in Persian Gulf (U.S. Air Force/Patrick Dixon); U.S. paratroopers with troops from Egypt, Germany, Kuwait, and Yemen land at Koum Asheem drop zone, exercise *Bright Star* (Third Army Public Affairs /Kevin Buckley); Marine communicates with other Multi-National Force–West members during Operation *Defeat al Qaeda* (U.S. Marine Corps/Tyler Hill); and Soldiers patrol in mountains of Tagab Valley in Afghanistan (55th Signal Company Combat Camera/Tyfanni L. Davis).

CONTRIBUTIONS

Joint Force Quarterly welcomes submission of scholarly, independent research from members of the Armed Forces, security policymakers and shapers, defense analysts, academic specialists, and civilians from the United States and abroad. Submit articles for consideration to the address on the opposite page or by email to JFQ1@ndu.edu "Attention A&R Editor" in the subject line. For further information, see the guidelines on the NDU Press Web site at ndupress.ndu.edu.

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From the Chairman

It's Time for a New Deterrence Model

Our strategy is one of preventing war by making it self-evident to our enemies that they're going to get their clocks cleaned if they start one.

—General John W. Vessey, Jr., USA
Chairman of the Joint Chiefs of Staff, 1982–1985

B–2 Spirit stealth bomber in support of Operation *Iraqi Freedom*

30th Space Command Squadron (Richard Freeland)

It is way past time to reexamine our strategic thinking about deterrence. General Vessey's belief in "cleaning clocks," characteristically blunt though it was, summed up nicely the urgency and the intent of our Cold War mentality. Unfortunately, that is just about where we left it—back in the Cold War, strewn among the rubble of the Berlin Wall.

Deterrence today is tougher and more complex; more than one nation can now reach out and touch us with nuclear missiles. Americans are potential targets of terrorism wherever they travel, and regional instability in several places around the globe could easily erupt into large-scale conflict. Even before Russia's move against Georgia over South Ossetia and Abkhazia in August, U.S. allies were revisiting longstanding assumptions about America's protective security umbrella.

The United States may not face a nation-state enemy right now, but as many writers in this issue of *Joint Force Quarterly* point out, the threats we do face are just as treacherous, just as deadly, and even more difficult to discern.

Yet we have done precious little spade-work to advance the theory of deterrence. Many, if not most, of the individuals who worked deterrence in the 1970s and 1980s—the real experts at this discipline—are not doing it anymore. And we have not even tried to find their replacements. It is as if we all breathed a collective sigh of relief when the Soviet Union collapsed and said to ourselves, "Well, I guess we don't need to worry about *that* anymore."

But worry we must. And act quickly we should. Terrorists *are* trying to obtain weapons of mass destruction. Some states, against international pressure, *are* trying to build and/or improve their own nuclear weapons. The specter of state-on-state conflict, though diminished, has *not* disappeared.

We need a new model for deterrence theory, and we need it now. Time is not on our side.

This model must possess at least three particular attributes.

First, it should espouse the highest standards of nuclear preparedness. The bulk of our strategic deterrence still relies upon the effectiveness of our nuclear arsenal. U.S. nuclear forces contribute uniquely and fundamentally to deterrence through their ability to impose costs and deny benefits to an adversary in an exceedingly rapid and devastating manner. They cast a lengthy shadow.

Regrettably, a lengthy shadow has also been cast over our own competence in handling this arsenal. We must turn this around.

We must revitalize our nuclear support infrastructure. We must hold ourselves accountable to unimpeachably high standards of training, leadership, and management. And we must recruit and then retain the scientific expertise to preserve and extend our technological edge in nuclear weaponry. Barring these improvements, a legacy force structure supported by a neglected infrastructure only invites adversary misbehavior and miscalculation. Deterrence then becomes anything but.

Secondly, the model must be credible. The enemy, or potential enemy, must be convinced that taking a specific action will bring them more harm than benefit. General Vessey would certainly agree with that, would he not? But credibility today requires flexibility.

Flexibility in our deterrence construct hedges against the possibility that adversaries might incorrectly perceive their actions as "below the threshold" of U.S. resolve and response. We must manage that threshold by looking at ways to limit the pain an adversary can cause through advanced defensive measures. Adversaries must know that they have a limited ability to hurt us.

We must also be able to act proportionally and across the whole of government, escalating and deescalating tension, predicting as best we can when a deterrence strategy is *about to fail* and shifting as required. These on-ramps and off-ramps provide a vital measure of control in conflict and give both sides a chance to solve problems more carefully.

A big part of credibility, of course, lies in our conventional capability. The capability to project U.S. military power globally and conduct effective theater-level operations across the domains of land, sea, air, space, cyberspace, and information—including the capability to win decisively—remains essential to deterrence effectiveness.

We must therefore address our conventional force structure and its readiness as a deterrent factor, especially after 7 years at war. We must enhance our capability to rapidly locate and destroy targets. We must conduct sufficient contingency planning that considers all facets of escalation and deescalation in crisis management. And we must improve conventional global strike capability, further develop global missile defense systems, and modernize our strategic weapons systems and infrastructure.

Nor can we forget the conventional capabilities of our partners and friends. We must strengthen *their* capacity to deter *their* enemies, and we must stay engaged globally. Coalition military cooperation and integration can and do have a tremendous impact on an adversary's perception of the political will of the United States and its allies.

Lastly, any modern model of deterrence needs to address the challenges posed by extremists and ideologues. How do we account for the fact that traditional concepts of deterrence do not work against a terrorist whose avowed tactics are wanton destruction and the targeting of innocents? How do we deter an idea or a movement?

There are no easy answers. The deterrence of state sponsors is a start, but so, too, must we find ways to delegitimize the idea itself and to subvert the movement. That notion has been at the heart of the counterinsurgency strategy that we have employed successfully in Iraq: replace the fear that terrorists hope to engender with the very hope they fear to encounter.

Give people something positive to hold on to instead of something negative to avoid. Give parents a chance to raise their children to a better standard of living than the one they themselves enjoyed. Do that and we deter not the tactics of terrorists—they will still try to kill—but rather the ends that they seek to achieve. And *that* is deterrence of a truly strategic nature.

Of course, this improved stability cannot be achieved by military means alone. Again, Iraq illuminates the point. Security on the ground has been quite necessary there, but it was never sufficient. Political reconciliation, economic development, social and cultural accommodation, and a higher sense of Iraqi nationhood and ownership have all proven vital to the progress we have witnessed. And all of it was the result of a truly international and interagency effort.

Silo on Alaska Missile Defense Complex

49th Missile Defense Battalion (Jack W. Carlson III)

More than 40 years ago, Henry Kissinger warned that deterrence is "above all a psychological problem. The assessment of risks on which it depends becomes less and less precise in the face of weapons of unprecedented novelty and destructiveness. A bluff taken seriously is more useful than a serious threat interpreted as a bluff."

Today, I would agree that deterrence is still fundamentally a psychological problem. But the time for bluffing is over. We need to be ready—actually and completely—to deter a wide range of new threats. It is not just about cleaning someone else's clock anymore. We need a new model of deterrence that helps us bring our own clock up to speed with the pace and the scope of the challenges of this new century. Time hack . . . now.

MICHAEL G. MULLEN
Admiral, U.S. Navy
Chairman of the Joint Chiefs of Staff

DEADLINE *Approaching* for *JFQ* Issue 53

FEATURING

Global Strategic Outlook

Submissions Due by December 1, 2008

JFQ Issue 54

Featuring

Military Force and Ethics

U.S. Strategic Command

Submissions Due by March 1, 2009

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Open Letter to *JFQ* Readers

In the January 2009 issue of *Joint Force Quarterly*, we will conclude our survey of conflict in the context of traditional media with a focus on Land Warfare issues and challenges. *JFQ* enjoys the great luxury of receiving numerous unsolicited manuscripts on subjects that cover the waterfront of national security concerns. Frequently, we are asked whether we will consider essays on subjects that lie outside the focus areas solicited on this page in each issue. The answer is a resounding *yes*. More than half of each issue is dedicated to areas of contemporary interest that cannot be anticipated by our 2-year publication plan. Additionally, Admiral Mullen periodically issues calls for your professional insights in areas of narrow focus.

Two areas of current interest are:

1. U.S. expertise in strategic deterrence is frequently criticized as less than robust. Is this in fact the case? If so, recommend solutions for improving military and civilian prowess in this field.

2. Service and joint professional military education has received much recent criticism because it is alleged to expose students to strategic *thought* without actually training them to *think* strategically. Is this a valid criticism? If it is, how can this problem be resolved, given the fact that educational curriculums are already highly saturated?

JFQ encourages you to submit manuscripts that speak to your unique professional strengths and interests. Boldly challenge traditional thought and practices in the joint, interagency, national security community, and propose a new school solution!

***JFQ* would also like to solicit manuscripts on specific subject areas in concert with future thematic focuses. The following topics are tied to submission deadlines for upcoming issues:**

December 1, 2008 (Issue 53, 2d quarter 2009):
Global Strategic Outlook

March 1, 2009 (Issue 54, 3d quarter 2009):
Military Force and Ethics
U.S. Strategic Command

June 1, 2009 (Issue 55, 4th quarter 2009):
Force Modernization, Technology, and Innovation
Essay Competition Winners

September 1, 2009 (Issue 56, 1st quarter 2010):
Irregular Warfare
U.S. Special Operations Command

JFQ readers are typically subject matter experts who can take an issue or debate to the next level of application or utility. Quality manuscripts harbor the potential to save money and lives. When framing your argument, please focus on the *So what?* question. That is, how does your research, experience, or critical analysis improve the reader's professional understanding or performance? Speak to the implications from the operational to the strategic level of influence and tailor the message for an interagency readership without using acronyms or jargon. Also, write prose, not terse bullets. Even the most prosaic doctrinal debate can be interesting if presented with care! **Visit ndupress.ndu.edu to view our NDU Press Submission Guidelines. Share your professional insights and improve national security.**

Colonel David H. Gurney, USMC (Ret.)
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Executive Summary

The danger of terrorists acquiring a nuclear weapon is real. Between 1993 and 2006, there were 1,080 confirmed incidents of illicit trafficking in nuclear materials. Eighteen of those cases involved weapons-grade materials, and another 124 involved material capable of making a so-called dirty bomb that would use conventional explosives to spread nuclear material.

—Senator Joseph Lieberman
July 16, 2008

I believe Iran is headed in the direction of building nuclear weapons and having them in their arsenal. And we need to figure out a way to ensure that that doesn't happen.

—Admiral Michael Mullen
July 20, 2008

israelforum.com

Iranian military conducts missile test during recent exercise

Weapons of mass destruction (WMD) are the ultimate instruments of terror. It is Department of Defense policy to dissuade, deter, and defeat those who seek to harm the United States, its citizens, its Armed Forces, and its friends and allies through WMD use or threat of use, while maintaining the ability to respond to and mitigate the effects of WMD as deterrence is restored. Yet the very term *weapons of mass destruction* has been employed so casually in recent decades that the concept behind it fails to provoke apprehension—much less fear and trembling—in many, if not most, citizens. This is due in part to the fact that such weapons are, in all their myriad forms, very much abstractions. To an even greater degree than tsunamis and earthquakes, WMD events are horrors that few imagine will ever touch their lives. As a result, animating the public to shoulder the burden of expensive or risky efforts to dissuade, deter, and defeat those who appear inclined to use WMD is a challenge. After all, the use of WMD is widely (and wrongly) regarded as unthinkable for all but the most irrational. For these reasons and more, it is important for national security professionals to contemplate and communicate the complex implications of WMD before, during, and after their employment.

If it is true, as noted deterrence theorist and former Deputy Assistant Defense Secretary Keith Payne argues in *The Great American Gamble*, that U.S. policymakers in the 1960s and 1970s believed it would promote stability to expose U.S. citizens to thermonuclear attack, the calculus has since changed. The emergence of transnational terror movements covertly and overtly supported by nation-states in an age of WMD proliferation has eroded traditional deterrence. So too have the published memoirs of former U.S. leaders who claim to have been "bluffing" in past confrontations. Ironically, Russia continues to decry ballistic missile defense as destabilizing, while simultaneously building nuclear reactors in Iran, supplying uranium to fuel them, and providing state-of-the-art integrated air defenses to defend them. Yet in February 2008, Russian Foreign Minister Sergei Lavrov insisted, "We do not approve of Iran's actions in constantly demonstrating its intentions to develop its rocket sector and in continuing to enrich uranium." In July 2008, the commanders of U.S. Strategic Command and U.S. European Command urged Senate leaders to approve a $712 million request for missile defense sites in Poland and the Czech Republic. In the words of General Kevin Chilton, USAF, "We cannot wait to counter long-range, WMD-capable Iranian missiles. Deploying missile defenses in Europe would demonstrate our resolve to deter this threat, and protect our nation and allies by providing a critical capability to the war fighter."

The Proliferation Security Initiative, announced by President George W. Bush in May 2003, continues to exercise and refine procedures to interdict shipments of WMD, delivery systems, and related materials at sea, in the air, or on land. This is just one of several recent international initiatives to augment traditional deterrence and punishment strategies. Should deterrence and interdiction fail, the secondary and tertiary effects of even a minor WMD event harbor the potential to far outstrip the direct carnage of the weapon(s). The economic dislocations alone may fundamentally change the world order in unpredictable ways, even without escalation. Personal travel, civil liberties, food production, and environmental damage will represent just part of the domestic context for strategic decisionmaking. It is common to think primarily of nuclear weapons when the subject of WMD arises, but some experts assert that biological and chemical WMD shall inevitably present a threat that equals or exceeds the effects of one or more nuclear weapons. In this issue, *JFQ* considers various weapons of mass destruction and some implications for strategic planners before and after their use.

Our first installment in the Forum is an essay from the Secretary of Homeland Security, Michael Chertoff. In speaking of biological threats to America, he notes the stark contrast between a nuclear and a biological WMD attack. The first starts with a bang, and the second arrives with "a whimper," requiring hours or days before the magnitude

U.S. Air Force (Jeremy Morrison)

Lt Gen Henry Obering, Director, Missile Defense Agency, briefs press on status of Missile Defense Program

of the disaster is realized. Because natural biological pandemics *do* occur, it is essential that the Federal Government accurately and expeditiously determine the provenance of the outbreak. Advance planning is the only way to mitigate the attendant risk, and Secretary Chertoff identifies three categories of focus: awareness and detection, prevention and protection, and finally, response and recovery. A panorama of planning and legal issues has yet to be resolved, such as restrictions on movement and measures to control infection, both of which fall within the jurisdiction of the states. If the Federal Government is not able to trump individual states in these areas, chaos could ensue. The Secretary's bottom line is that "the time to have thorough, candid, and public conversations about these issues and tradeoffs is today, before anything happens tomorrow."

The second Forum entry is a superb advocacy narrative from Clark Murdock at the Center for Strategic and International Studies. Dr. Murdock persuasively argues that the U.S. strategic nuclear mission has been neglected since the fracturing of the Soviet Union and that this development undermines deterrence. He assures readers that the vision of a world without WMD is a fantasy. On the contrary, a nonstate actor is *likely* to use a nuclear device in a terrorist attack. Yet there seems to be a "nuclear allergy" of antipathy, or just apathy, toward this prospect in Washington that has led senior civilian leaders to "mainstream" nuclear weapons to lower levels of oversight. Dr. Murdock challenges Washington to get serious about its nuclear strategy, policy, and force posture. As a remedy, he recommends the establishment of a U.S. Nuclear Forces Command, which "would end Department of Energy risk-averse micromanagement of the nuclear complex." He would also appoint a National Security Council special assistant to the President for nuclear issues. Dr. Murdock writes, "It is far better for the United States to have a credible nuclear deterrent than to feel compelled to employ a nuclear weapon because its nuclear deterrent failed."

The third Forum article questions the current national policy of using nuclear weapons as an option to retaliate against chemical-biological (CB) weapons. Albert Mauroni asserts that while terrorists have attempted to use crude industrial chemicals in the past, there have been no successful uses of military-grade CB warfare agents resulting in a mass casualty event. Military analysts and academics, he complains, apply an outdated Cold War model to the current and future employment of CB weapons, resulting in the stagnation of ideas and concepts regarding how the United States ought to address the threat of terrorist WMD incidents. The Cold War concept of massive CB weapons employment combined with arms control discussions on the impact of unconventional weapons served to conflate CB munitions with WMD. He argues that the CB threat is actually much more manageable than experts believe and that many nation-states have recognized their national security goals have changed, devaluing the massive use of nuclear, biological, and chemical (NBC) weapons. Due to the limited number of actual NBC warfare cases throughout history, there is a great deal of supposition and little actual experience by which to analyze and predict how future state and nonstate players might employ these unconventional weapons. He concludes that deterrence will not work against a nonstate actor employing CB WMD.

Our fourth installment is a natural complement to the second. Like Dr. Murdock, Stephen Cimbala speaks to the erosion of deterrence, in this case the rhetorical deterrence of declaratory policies addressing "first

use" or "first strike" for the purpose of threat preemption and prevention. Due to proliferation, political and military leaders in both the East and West have increased the frequency of public declamations on issues such as preemption of nonstate actors, which previously were treated as internal military matters. Dr. Cimbala presents a methodology for analyzing various aspects of the first use/first strike and preemption/prevention problems as they might play out in alternative nuclear "worlds." This analysis leads him to the conclusion that current declaratory policies against transnational terrorists and the states that harbor them are unlikely to deter WMD terrorism. Furthermore, nuclear weapons are probably not the right tools for the preemption of nonstate actors. Improved intelligence, conventional munitions, and international cooperation are the best courses of action to achieve desirable outcomes.

The fifth essay picks up where Dr. Cimbala's essay leaves off in the area of improved international cooperation to deal with the problem of WMD proliferation. Paul Bernstein's argument begins with the security context of accelerating globalization, especially in the arenas of technology and politics. Technologies with both legitimate and WMD applications are spreading globally at the same time that traditional state power is eroding and less powerful nations seek to challenge the status quo through applications of violence. As globalization promotes proliferation, the United States has attempted to augment traditional deterrence with a greater focus on practical cooperation with international security partners to build defense and response capabilities. These flexible networks give many nations a stake in combating WMD, contribute to shared security goals, foster a common understanding of the threat, and build habits of cooperation over time. After detailing the most important of these efforts, Dr. Bernstein presents the challenges ahead and enjoins the next U.S. President to establish a framework for action that will strengthen an international consensus for greater practical cooperation.

Our sixth Forum article addresses North Atlantic Treaty Organization (NATO) efforts to mitigate the erosion of deterrence by fielding an integrated ballistic missile defense. Peppino DeBiaso begins by outlining the security changes that the United States and its NATO allies have endured since the breakup of the Soviet Union, presenting all concerned with broader and more complex challenges today. The current U.S. long-range missile defense proposal would place 10 ground-based interceptors in Poland, supported by a fixed X-band radar in the Czech Republic. The data collected by this radar, optimized to detect ballistic payloads from the Middle East, would guide interceptors to nonexplosive yet catastrophic collisions. Individual alliance members are already pursuing shorter range missile defense shields to be incorporated into a layered theater ballistic missile defense system that is compatible with the U.S. long-range system. Despite strong objections from Russia, the long lead time for building and deploying missile defenses in the face of a growing threat increases the urgency for timely, comprehensive action. Dr. DeBiaso concludes by identifying four concurrent areas of attention that together will strengthen NATO readiness to adapt to the rapidly changing security environment.

The next Forum entry was solicited to assess the readiness of the United States to respond domestically in the aftermath of a chemical, biological, radiological, nuclear, or high-yield explosive (CBRNE) attack. Colonel Zygmunt Dembek compares historic U.S. civil defense preparations to those of contemporary readiness and Israel's exemplary posture. A high degree of readiness is impossible until society is willing to pay the social and economic price, making deterrence and early warning systems critical. Colonel Dembek emphasizes that concern for the national level of preparedness must begin with health care providers and the hardening of the U.S. health care infrastructure. He takes the reader on a survey of military organizations, educational opportunities, and leadership roles that contribute significantly to disaster response and recovery. He concludes with an assessment of the relative effectiveness of civilian versus military leadership in the face of national emergencies.

The concluding Forum article also addresses a domestic mass casualty scenario and the practical lessons gleaned from the U.S. Northern Command exercise Ardent Sentry 2007 (AS07). This consequence management evaluation featured a no-warning terrorist detonation of a 10-kiloton nuclear device in metropolitan Indianapolis, killing 15,000 and injuring 21,000 more. Michael Snyder and Thomas Sobieski focus on the planning implications of the difference between decontamination operations conducted in a defense support to civilian authorities (DSCA) environment and that done by military decontamination units in combat. In a large-scale catastrophic event where state and local capabilities are overwhelmed, the Federal Government, with the Department of Homeland Security as lead agency, assists in mitigating effects. But because the decontamination gear employed by military personnel is incompatible with that used by civilians, the authors argue that all elements of the DOD response community must become familiar with civilian equipment and procedures. They also present a list of special considerations for CBRNE planners for the DSCA role. The procedures and capabilities to conduct mass decontamination have undergone dramatic changes, and DOD personnel can expect to be asked to augment local first responders, whether they are ready or not.

As usual, the final offering in this issue is our Recall feature. In it, nuclear weapons designer and former Secretary of the Air Force Thomas Reed, along with co-author Danny Stillman, a former Los Alamos physicist, address the early history of WMD. In the Prologue of their forthcoming book, *Nuclear Express*, they make the following observation:

Ever since the 1945 Trinity event, nuclear politics have been challenging our ability to survive. As one century gives way to another, nuclear weapons are falling into less well-manicured hands, but their purpose remains the same: to effect a drastic change in the geopolitical status quo. It was once the surrender of Japan or the halting of Soviet expansion that we Americans sought. It is now the eradication of Western culture or the abolition of the state of Israel that the Islamic extremists seek. A million lives may be lost along the way, but Armageddon is not necessarily the objective of these nuclear acolytes.

In 2001, a transnational terrorist organization was able to incite a powerful nation-state to wage war against two other states. If it is possible for transnational terrorist organizations to instigate conventional state conflicts to suit their own purposes, then it must also be possible and even desirable from their perspective to do so with WMD. Whatever their objectives, it is obvious that we need to identify these actors as they emerge and deter or deny them the opportunity to employ the most extreme form of terror. **JFQ**

—D.H. Gurney

Confronting **Biological Threats** to the **Homeland**

By MICHAEL CHERTOFF

One of the most important priorities for any government is to protect society from lethal threats. Part of that mission necessarily involves guarding against the havoc that biological forces are capable of wreaking on any population.

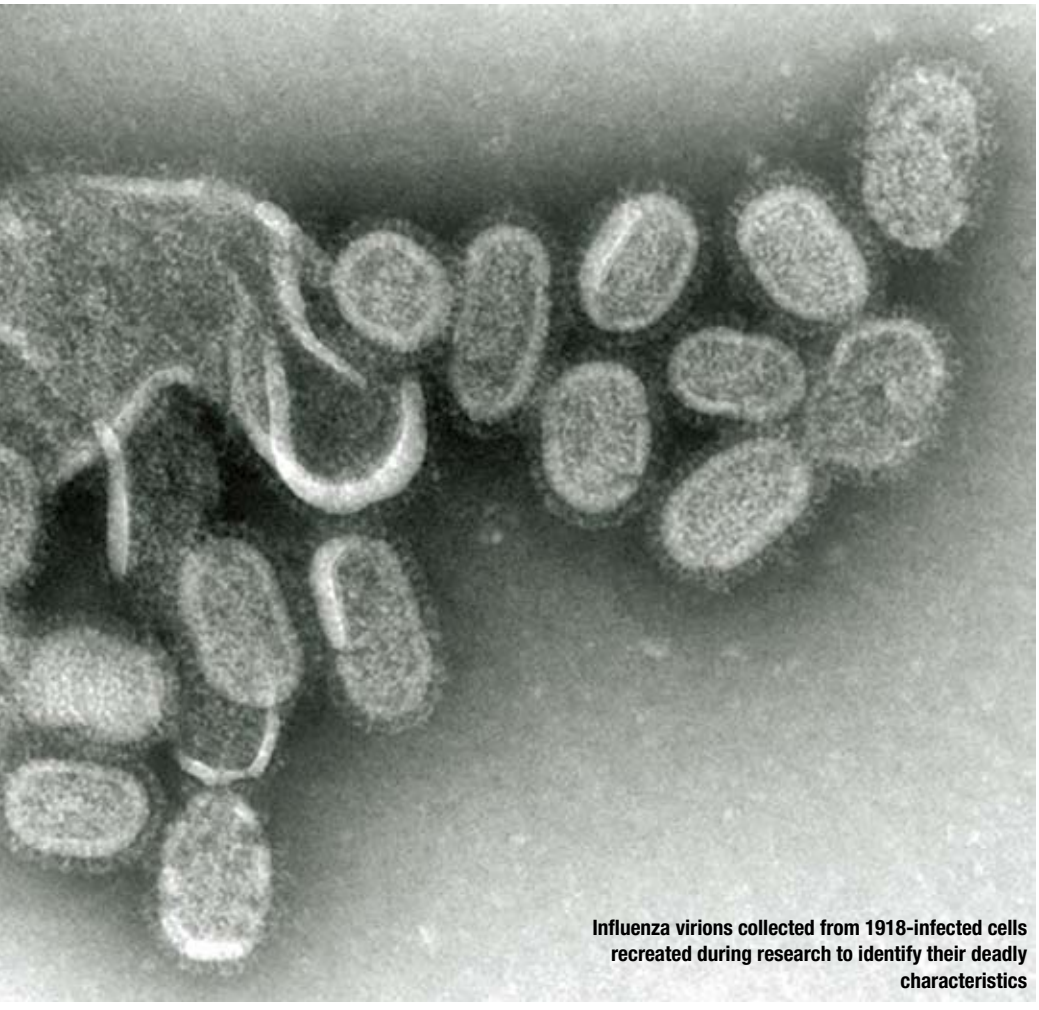
Such forces can come in the form of pandemics or very serious epidemics—deadly communicable diseases that can ravage communities and potentially threaten the fabric of society. While such diseases have surfaced throughout history in discrete areas of the world, the interdependent, global nature of today's world can facilitate their rapid spread across oceans and continents.

This naturally occurring peril is compounded by the fact that the modern wonders of science and technology enable dangerous individuals and groups to harness these potent biological forces, turning them into actual weapons of mass destruction.

While such natural threats as pandemic influenza have yet to reach fully efficient human-to-human transmission, our post-9/11 society faces a more immediate, manmade threat from individuals seeking to unleash destruction. In the wake of 9/11, we saw anthrax attacks at home, and we have since seen ricin attacks in other parts of the world.

In response to these dangers, we have taken a number of steps to help mitigate at least some of the risk. And we have begun to think seriously and in a disciplined fashion about how to plan for dealing with a major natural pandemic or biological attack. The challenge is to act decisively and effectively to minimize damage in an environment in which there will be imperfect information and potentially hundreds of thousands, if not millions, of lives lost.

The key to meeting the challenge is to approach it in a systematic, comprehensive way. We must fully examine the biological threats we face, address the capabilities we must continue to build in order to mitigate them, and consider the complex legal and ethical issues that will arise during a biological calamity if ever we have one.



CDC (Cynthia Goldsmith)

Influenza virions collected from 1918-infected cells recreated during research to identify their deadly characteristics

The Need for Planning

Since a biological outbreak, such as pandemic influenza or a major anthrax attack, is one of the most catastrophic scenarios that this country could face, advance planning and preparation are critical. We must work hard today, before disaster strikes, to determine who should be doing what should a disaster happen tomorrow. If we fail to plan, we plan to fail, risking a worst-case outcome. A plan at least provides a running start, as will training and exercising.

Planning must involve an understanding of the full dimensions of a public health emergency—natural or manmade. Inevitably, each profession views calamity through the lenses of its own discipline. Thus, medical and public health personnel believe it is all

Michael Chertoff is Secretary of the Department of Homeland Security.

about medicine and public health. They seek to cure, vaccinate, and alleviate suffering. Yet that is only one part of what must be done during such a crisis.

A biologically induced catastrophe could impact every aspect of society. Issues of scarcity could develop, from emergency room capacity to distribution of medicine. Beyond that, absenteeism across the economy could ensue because of the number of people who would become ill, fear exposure to illness, or stay home with their children if schools close.

When enough people stay home, then without a plan, the powerplants cannot run and food will not arrive in supermarkets, which could be closed if no one is there to open them.

The results could be cascading problems producing a ripple effect across society, magnifying the damage already inflicted by the underlying disaster.

Compounding these difficulties is the fact that biological disasters arrive not with a bang but a whimper. It can be hours or days before the full impact begins to dawn on society. Moreover, our ability to study or predict the course of the epidemic or pandemic will depend profoundly on how accurate we are in deciding whether it is a natural or a manmade incident.

Our public health models presume we know how ordinary diseases spread and circulate. But if a person is carrying an aerosol tank, spraying it in different locales, such behavior will confound the model. Correctly determining whether the problem is natural or manmade is essential.

Finally, since a biological event would not typically involve an explosion, it would not be initially experienced by most people as dramatic.

To sum up, if our society continues to avoid sufficient planning, training, exercising, and stockpiling in response to this threat, then if we are ever faced with an efficient human-to-human transmission of pandemic flu or a full-scale anthrax attack, we will not have time to deal with it. If there is one lesson that the 7 years since 9/11 should have taught, it is that advance planning is the only way to respond to a major threat to safety and security.

This is certainly true regarding the threats posed by the prospect of naturally occurring contagious diseases migrating here and proliferating. It is at least equally true with respect to the risk of biological agents being weaponized and circulated by terrorists.

In the late 1990s, al Qaeda began to focus on developing a biological weapons program. After the invasion of Afghanistan, we determined that there was a low-tech facility in Kandahar, which was aimed at producing anthrax as a weapon. Fortunately, the United States disrupted that laboratory. Moreover, our ejecting al Qaeda from safe havens made it harder for its members to convert chemical or biological substances into weapons of mass destruction. But the increasing development of safe havens along Pakistan's border with Afghanistan and elsewhere is worrisome precisely because they can become sites for reconstituted laboratories for weaponization.

Moreover, al Qaeda has made it clear that it has no moral qualms about using such weapons once they are made. In 2002, it claimed a moral license to kill millions of Americans in response to imagined mistreatment by the West, and it has since reiterated that claim. Given its barbaric use of weaponry it already possesses, there is no reason to believe that al Qaeda would not use chemical and biological weaponry—such as aerosolized anthrax, our chief bioterrorism concern—given the opportunity and a fully developed capability.

A Strategy

So what is our strategy for dealing with these dangers?

It is based on Homeland Security Presidential Directive (HSPD) 10, "Biodefense for the Twenty-first Century," which identifies three key areas of focus: threat awareness and detection, prevention and protection, and response and recovery.

the challenge is to act decisively to minimize damage in an environment in which there will be imperfect information and potentially hundreds of thousands, if not millions, of lives lost

Threat awareness addresses the need to identify and, if possible, incapacitate a threat before it occurs. In the case of pandemic flu, that means identifying and addressing a problem area affected by a possible mutation that allows human-to-human transmission so the threat can be contained. The dilemma arises when other countries fail to disclose that they have a problem area, fearing it would harm their ability to travel and conduct business across the globe. That is

Air Force (Taylor Marr)

Airmen conduct biohazard readings during antiterrorism/force protection exercise

why, in order to detect such areas, we must be prepared to deploy our intelligence tools.

This is all the more true if the threat is manmade.

Thus, when it comes to threat awareness, we have to operate on a number of levels.

First, we must search for signs of laboratories across the globe that could be poised to weaponize materials. That requires old-fashioned intelligence work, so we can get the information we need to determine if there is a biological attack being planned against us or our allies. In a very real way, then, intelligence is a critical element in promoting public health in the 21st century.

if there is one lesson that the 7 years since 9/11 should have taught, it is that advance planning is the only way to respond to a major threat to safety and security

The value of this kind of intelligence was vividly demonstrated in London this spring, at the trial of those suspected of plotting to blow up transatlantic airliners two summers ago. Based on diligent intelligence gathering, we learned about the elaborate efforts made to manufacture explosive devices concealed in sports drink bottles.

There simply is no adequate substitute for good intelligence that can help us detect the initial emergence of dangerous biological pathogens or their appearance in our country. For the 91 million people who come to the United States by air, or the 411 million who arrive by land each year, we can screen for incoming nuclear or radiological devices, but it is pure fantasy to imagine medically testing all of them as well.

Of course, if we have reason to believe there is illness afoot, then we can begin testing some individuals. If we had credible information about a pandemic brewing elsewhere in the world, we could redirect flights and aircraft from the affected region and screen their passengers more intensively. So screening can be of value, but not without the intelligence that lets us focus on those individuals who might pose a genuine risk.

In other words, to a large degree, detection depends on intelligence. And when it comes to countering biological threats, speed of detection is crucial. It enables us to discover the dimensions of the problem and prepare an efficacious response. A delay of just 1 day in detecting an anthrax release would delay treatment accordingly, triggering thousands of deaths. To ensure detection, we need to fuse three types of information. One is traditional clinical data. That means relying on the public health community to gather information about people with symptoms that could suggest the presence of something like anthrax or a plague. The problem with this information alone is that by the time symptoms appear, society is already behind the curve. The disease is already upon us.

Airman administers anthrax vaccine during operational readiness inspection, Kunsan Air Base

Air Force (Barry Loo)

A second type of information is available to supplement this data. This information concerns pathogens in the air itself. Fortunately, we have a BioWatch program with pathogen detectors around the country to help us locate and warn of the presence of airborne pathogens. In some instances, I have been present when an alarm was triggered from one of these detectors. And depending on the number of detectors in the location and the nature of the pathogen, Department of Homeland Security authorities immediately phone local health officials and our counterparts at the Centers for Disease Control or the U.S. Department of Health and Human Services (HHS). On such occasions, we try to analyze whether we are dealing simply with a naturally occurring pathogen (such as tularemia) or hints of something worse.

And the final type of information we use to facilitate detection is nonmedical intelligence about enemy threats. For example, a little over a year ago, a case was reported from a hospital that appeared to involve anthrax. We were able to determine that the patient had traveled from a part of the world where anthrax occurs naturally on the skin, and so the matter was resolved and the patient treated.

But let us suppose that in addition to obtaining that clinical information, we had received intelligence that terrorists were about to launch an anthrax attack against the United States. That information would have immediately altered our approach to the patient. We probably would have surged biological detection capability into the area to see whether there was evidence of anthrax spores. And then our ability to use detection tools on location and across the Nation would have come into play, enabling us quickly to characterize the nature of the incident and formulate our response.

To integrate these three types of information—clinical, detection, and nonmedical intelligence information—we have a program under way to create a national biosurveillance integration center, which is now up and running and will be fully operational later this year. By fusing the clinical data, the regular intelligence information, and ultimately the BioWatch data, including next generation sensors, we can ensure that

decisionmakers have an early, immediate, and comprehensive picture of the kind of pathogens that are out there so they can characterize them.

Besides threat awareness and detection, the second of our three areas of focus in dealing with biological threats concerns protection. As we respond to a medical threat, we must work with the business community and use some of the government's tools to prevent disruption in food, water, the power supply, and other necessities while dealing with the hours, days, or even weeks and months of a pandemic or some comparable biological attack.

Part of this is a planning issue. It involves ensuring close coordination between people who operate critical infrastructure and medical personnel with on-the-ground facts about what constitutes appropriate treatment. It also involves ascertaining the actual fear of contagion and the appropriate countermeasures and restrictions that belong in place to ensure that people can come to work with a minimal risk of contracting an illness.

And finally, in addition to awareness and detection, and prevention and protection, we must address the matter of response and recovery with respect to biological threats. It is clearly a complex undertaking. There is obviously the provision of medical care, which lies within the domain of the public health authorities including HHS. They must not only develop and stockpile medicines and vaccines, but also be able to distribute them. In many ways, we and our state partners would be the arms and legs of that distribution.

In the case of a manmade attack as opposed to a natural occurrence, the Department of Justice would play a critical role. If we believed that people possessing the pathogen were moving around the country, finding and arresting them would be an obvious matter of urgency. The ability to limit the damage and need to respond would be a direct result of our ability to intercept the culprits and prevent their carrying out further attacks.

The Environmental Protection Agency would play a vital role in making sure that once the problem was stabilized, we would understand what was needed to clean up and render the affected area safe for reentry. The Department of Agriculture would ensure there were no untoward effects on our food supply. And the Department of Defense would bolster our efforts by putting boots on the ground to perform critical functions pertaining to security and treatment should a surge be necessary.

This indicates the range of departments that must be integrated, brought together, and coordinated through the interagency system in the event of a biological attack. The paramount goals would be to prevent further damage, steer medical supplies and lifesaving items to people, ideally within 48 hours, and provide the public clear direction so their actions do not make their own situation worse.

And that brings us to the core of what we must do to prepare. We must get people to understand how to evaluate messages in the aftermath of a disaster, what personal preparedness plans they must have in place in terms of medicines and other items that they and their loved ones need, and where to go on the Internet to obtain further information that they and their families may need.

One of our most formidable challenges is how to distribute vaccines or medicines among millions of people in a 48-hour, "make-it-or-break-it" environment. Should we, for example—as we are currently considering and experimenting with—actually distribute prophylactic medical kits around the country or allow people to purchase those kits for their medicine cabinets? How do we make sure that people do not abuse them?

a delay of just 1 day in detecting an anthrax release would delay treatment accordingly, triggering thousands of deaths

And then how do we deal with the fact that, in any mass distribution, there will not likely be enough doctors to provide the checkups that normally precede administering pills for the enormous number of potentially affected people within the 48-hour span? Do we distribute medicines given the knowledge that some people will experience negative side effects, in some instances severe? If we believe that taking this risk with a small number of people is justifiable in order to avoid a certain hazard to a far greater number of people, then what is the liability for the manufacturer? Will the manufacturer or distributor be willing to provide medicines if the Government cannot assure them that they will not be sued? This is hardly an academic issue. Consider the Foreign Intelligence Surveillance Act issue and what happened to businesses that cooperated in good faith with the Government on security matters following the 9/11 attacks.

Simply stated, if Government's message to the business community is "cooperate with us during a national emergency, and then when it has passed we will change the rules and hold you liable," then we will get scant cooperation. A possible consequence would be that companies would not distribute enough antibiotics because they would be forced to wait for legal opinions before releasing them. In this case, it would be too late to fix the problem.

In summary, the threats posed by biological material are real enough, and we must confront them with a strategy that is comprehensive and a mindset that is clear-eyed and forward-looking.

During Operation *Enduring Freedom*, U.S. forces discovered low-tech facility aimed at producing anthrax in downtown Kandahar

1st Combat Camera Squadron (Ricky A. Bloom)

Legal Challenges

I would be remiss if I did not lay out some of the more challenging legal issues that could arise with the onset of a biological catastrophe. As with other aspects of this problem, it is essential that they be discussed and deliberated upon before, not after, a national emergency arises.

Questions concerning such issues as restrictions on movement and how to control infection fall within the jurisdiction of the states. We need to ask whether the Federal Government should be able to trump the states in these areas. If a New Jersey Governor were to decide that due to an outbreak in New York, no New Yorker could come into New Jersey, would that be acceptable? What if that made it harder to track down the perpetrators of the attack, or to ensure that adequate food was reaching the afflicted area?

Should we be able to regulate the bandwidth of our communications during a public health crisis so that employees can telecommute without disrupting the Nation's cyber systems? Should we ask broadband providers to restrict access for high-consumption, low-productivity devices such as video games so that we can use the bandwidth for more important things?

What are the limits on Government's ability to quarantine and isolate? Can people be prevented from doing the 21st-century equivalent of shouting fire in a crowded theater, providing deliberate or negligent misinformation on the airwaves that could cause the death of thousands of people who were misled about what to do during a medical emergency?

These are excruciatingly difficult questions with no perfect answers. The more thoughtful deliberation we have about them in advance, the better off we will be.

We must live with the consequences of our answers. If we decide that we must leave matters of quarantine in the hands of the states, we must understand that this will render the Federal Government incapable of forcing a state to institute a quarantine. Should a day come when a quarantine becomes a medical necessity, it will be too late to turn back the clock and do the decision over.

And returning to the liability issue, if our society is unwilling to hold companies blameless for distributing drugs to protect millions of people during a national emergency, it will do no good to blame them when not enough drugs reach the people who need them.

Clearly, the time to have thorough, candid, and public conversations about these issues and tradeoffs is today, before anything happens tomorrow. This is not only true of legal matters, but also of every aspect of the threat and how we should respond.

For those who insist that this is fearmongering about the unthinkable, they need to recall how before the morning of September 11, 2001, it would have seemed unthinkable that we could lose 3,000 American lives in a single day.

Preparing by word and deed for the unthinkable is hardly a pleasant exercise, but if we engage in it today, we can prevent far greater harm from befalling us tomorrow. If we plan for the worst, we just might avoid some and maybe even all of it. **JFQ**

Public health technician prepares mosquitoes for examination as part of disease control program

Air Force (Ashley Sorrels)

DOD and the Nuclear Mission

By CLARK A. MURDOCK

This article presents an advocacy narrative for the still important contributions that nuclear weapons make to U.S. security and outlines a set of recommendations for how the Department of Defense (DOD) should organize for the nuclear mission. After first addressing the role of nuclear weapons in 21st-century international affairs and national security, this article reviews how the nuclear mission has been neglected in the post–Cold War era and suggests what actions are needed to resuscitate the nuclear deterrent.

This *advocacy narrative* is not intended to be "balanced." The downside risks of this option ought to be presented in an advocacy narrative for the strategic options that *deemphasizes* nuclear weapons. When U.S. Presidents face strategic choices on important issues on which there is significant disagreement on the "basics," they must choose among fundamentally different courses of action rather than choosing the best way to execute a particular course of action. Trying to decide which actions the Government should take, without knowing which end-ways-means chain is being followed, results in purposeless decisions. As with other big issues, when it comes to nuclear strategy, policy, and force structure, one has to know where he is going before he can start moving in that direction.

Nuclear Weapons Now

In addition to their proven utility as a means to terminate a major conventional war, nuclear weapons were the principal instruments used by the great powers during the Cold War to deter each other. From a systemic perspective, nuclear deterrence suppressed the level of violence associated with major power competition: wartime fatalities consumed 2 percent of the world's population in the 1600s and 1700s, 1 percent in the 1800s, 1.5 percent in World War I, and 2.5 percent in World War II, but one-tenth of 1 percent during the

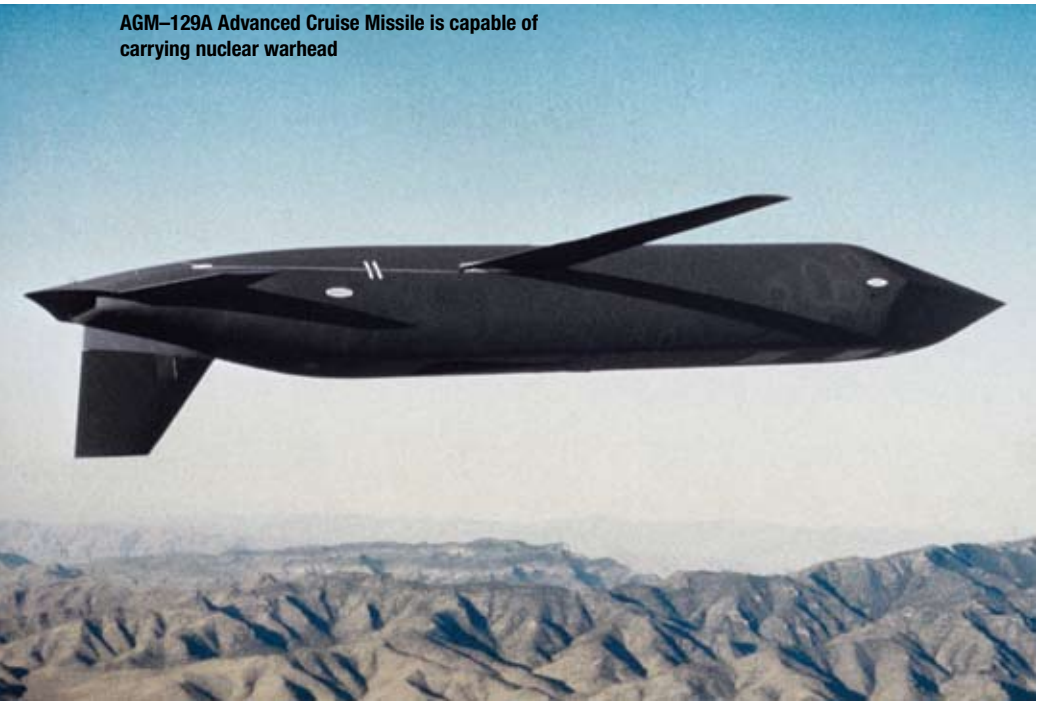
Dr. Clark A. Murdock is a Senior Advisor at the Center for Strategic and International Studies (CSIS). This is an abridged version of a longer report, *The Department of Defense and the Nuclear Mission in the 21st Century: A Beyond Goldwater-Nichols Phase 4 Report* (CSIS, March 2008).

Military personnel observe atomic explosion on Bikini Atoll

Atomic bomb test on Bikini Atoll engulfs prepositioned ships, 1946

Cold War (not including the Korean War, which pushed fatalities up to one-half of 1 percent). A leading practitioner of the art of nuclear deterrence, Sir Michael Quinlan, aptly observed, "Better a world with nuclear weapons but no major war, than one with major war but no nuclear weapons."[1]

That the violence-suppressive effect of nuclear weapons will continue into the 21st century was recently underscored by comments made by Cold War deterrent theorist and Nobel economics laureate Thomas Schelling. At a World Economic Forum retreat, Schelling recalled that no state that has developed nuclear weapons has ever been attacked by another state and that no state armed with nuclear weapons has ever attacked another state similarly armed.[2] While it does not make this author sanguine about the risks of further nuclear proliferation to states, regimes, or individuals that are more difficult to deter, it seems that *to date* nuclear weapons have made both possessors and their adversaries much more cautious about embarking on courses that could escalate to nuclear use.



AGM–129A Advanced Cruise Missile is capable of carrying nuclear warhead

U.S. Air Force

Although the United States appears to be allergic to all things nuclear, much of the rest of the world remains intensely interested in nuclear weapons. Those states that have them are modernizing their inventories; North Korea has paid dearly (politically and economically) to join the nuclear club; Iran is rapidly closing the capabilities gap to a weapons program; and North Korea's and Iran's neighbors, many of them U.S. allies, are pondering whether they might need to go nuclear as well. More particularly:

- The October 2006 North Korean nuclear test has stimulated an open debate in Japan—a "latent" nuclear power with a most severe nuclear allergy—about whether its evolution into a "normal" country should include membership in the nuclear club.[3]
- In October 2006, two articles appeared in the *Korea Times* quoting anonymous Korean nuclear scientists alleging that South Korea has the technical capability to produce a uranium-based weapon "within one year" and a plutonium-based weapon within "a couple of years" if the country required an independent deterrent "in an emergency."[4]
- A February 2008 staff report from the Senate Foreign Relations Committee found that "one impact of Iran's nuclear program has been to catalyze Turkey's nuclear energy development efforts" and that "Turkish perceptions of . . . the reliability of the U.S. security guarantee . . . will have an indirect but significant impact on Turkey's nuclear weapons decisions."[5]

States that have nuclear weapons, including those with stated ambitions to counterbalance U.S. power, are modernizing their inventories, delivery systems, and nuclear use doctrines:

- Russia now rejects a no-first-use policy for its nuclear weapons and follows a "more-bang-for-the-ruble" approach that gives nuclear modernization priority over that for conventional forces.
- China continues to invest in its strategic arsenal and capabilities with the objective of improving its power projection ability.[6] The addition of new ballistic and air- and ground-launched cruise missiles will give Beijing a more survivable and flexible nuclear force.[7]

Nation-states pursue nuclear status for many reasons. Nuclear weapons are seen as the ultimate guarantee of national sovereignty and survival; their possession is believed to confer world-class status; and they can serve as the "great equalizer" for nations facing competitors with significantly greater conventional military power.

although the United States appears to be allergic to all things nuclear, much of the rest of the world remains intensely interested in nuclear weapons

These are very strong incentives for acquiring nuclear weapons in a Hobbesian international system with weak central governance and few shared international norms. It is hard to disagree with Harold Brown and John Deutch: the notion of a world without nuclear weapons is a fantasy. Few Americans would give them up if other nations still possessed them. And if the world's strongest military power by far cannot give them up first, who can?

Nuclear weapons are unique in their capacity to inflict massive damage almost instantaneously. Their continued utility in the world of nation-states makes the "vision" of a world without nuclear weapons an illusion. The history of warfare is absolute—we humans are very inventive at finding new ways of killing each other, and once we do, we use them. At some point, hopefully as far in the future as we can make it, a nonstate actor is likely to use a nuclear device in a terrorist attack, and that employment by a nonstate actor is likely to affect how post-use nuclear deterrence works.

In retrospect, it has actually been quite remarkable that nuclear weapons have not

been used since 1945. It would be even more astonishing if they were not used during the next 60 years. Deterring nuclear attacks against the United States by multiple nuclear-armed regional adversaries is, at the least, more problematic than Cold War nuclear deterrence.[8] The author has participated in several "scenario seminars" in which a small nuclear-armed state in a conflict resorts to early use of nuclear weapons in an effort to compel the United States (by escalating across the nuclear threshold) to stop its conventional campaign against it. The National Defense University's Center for the Study of Weapons of Mass Destruction has concluded that "U.S. policymakers and military planners [while remaining focused on terrorist threats] should also take seriously the possibility of next state use" and advised that "[p]rudent policy should assume a next use of nuclear weapons is becoming more likely and will be a shock to the international system, especially if it is deemed successful in achieving the user's objectives."[9] It is necessary, not just prudent, to think how it will work in the post–next-nuclear-use era, if only for the purpose of delaying the start-date of that era for as long as possible.

Contributions to Security

The United States continues to say that nuclear deterrence is "critical"; the 2006 *Quadrennial Defense Review* (QDR) *Report* maintains that the U.S. nuclear deterrent is a "keystone of national power."[10] Upon her arrival in Japan days after the North Korean nuclear test, Secretary of State Condoleezza Rice invoked the U.S. nuclear deterrent when she stated, "The United States has the will and the capability to meet the full range—and I underscore the full range—of its deterrent and security commitments to Japan."[11] Similarly, former Defense Secretary Donald Rumsfeld agreed to a joint communiqué with the visiting South Korean defense minister on October 20, 2006, that "offered assurances of firm U.S. commitment and immediate support to the Republic of Korea, including continuation of the extended deterrence offered by the U.S. nuclear umbrella, consistent with the mutual defense treaty."[12] The continued need for a U.S. nuclear deterrent was underscored by recently retired U.S. Central Command commander General John Abizaid, USA, who stated flatly in September 2007, "I believe nuclear deterrence will work with the Iranians."[13] Evidently, the United States still needs a nuclear deterrent and acts as if it has one. But how credible is it?

During the Cold War, a credible nuclear deterrent depended on whether the Soviet Union (and others) believed we had the will and capability to carry out our threats. Changes in nuclear strategy—for example, from massive retaliation to flexible response—were driven by our perceptions of which threats would be most credible to those adversaries. The nuclear arms race was not just about building nuclear capabilities; it was about demonstrating resolve. One of the ways of demonstrating how serious we were about nuclear deterrence was to build more weapons. Another way was to test them.

The collapse of the Soviet Union and the emergence of the United States as the world's only conventional superpower led senior officials in Washington to greatly downgrade the value of nuclear weapons. President George H.W. Bush unilaterally eliminated entire classes of short-range nuclear weapons (Army systems and those on surface naval systems)

changes in nuclear strategy were driven by our perceptions of which threats would be most credible to adversaries

Secretary Gates and Air Force Space Command commander Gen Kehler prepare to address Space Command leaders about increased focus on nuclear mission

U.S. Air Force (Matt Lohr)

and withdrew almost all forward-deployed tactical nuclear weapons (with the exception of small inventories in the North Atlantic Treaty Organization).

The effectiveness of Secretary of State James Baker's "calculated ambiguity" in threatening Iraq on the eve of the first Gulf War with "terrible consequences" if Iraq used chemical weapons is still debated.[14] Whatever the utility of this U.S. nuclear threat intended to deter a proximate action, it was undermined by the memoirs of the senior policymakers involved. President George H.W. Bush and General Brent Scowcroft wrote that they had no intention of using nuclear weapons during that operation.[15] Chairman of the Joint Chiefs of Staff Colin Powell, when asked by Secretary of Defense Dick Cheney about nuclear options, stated, "Let's not even think about nukes. You know we're not going to let the genie loose."[16] It is hard to make credible threats when we tell the world (including future adversaries) that we were bluffing the last time we made one.

The Clinton administration conducted a Nuclear Posture Review (NPR) that concluded that "no new strategic systems are under development or planned."[17] In fact, the Assistant Secretary of Defense charged with the NPR stated, "Our intention is to have a military that doesn't need to use [nuclear, biological, and chemical] weapons. We can use conventional forces to prevail anywhere in the world."[18] Once its NPR was concluded, the administration paid little attention to U.S. nuclear strategy and policy, focusing instead on nuclear nonproliferation and counterproliferation issues.

The administration of President George W. Bush initially paid considerable attention to nuclear issues. That resulted in a May 2001 speech announcing the administration's commitment to build a ballistic missile defense, abrogate the 1970 Anti-Ballistic Missile (ABM) Treaty, and unilaterally reduce the U.S. inventory of nuclear weapons. At that time, President Bush stated he was "committed to achieving a credible deterrent with the lowest-possible number of nuclear weapons consistent with our national security needs, including our obligations to our allies."[19]

Secretary Rumsfeld launched his NPR in late spring 2001. The decisions made during the 2001 NPR (the agreement later codified in the Moscow Treaty with Russia to reduce long-range nuclear weapons inventories to 1,700–2,200 operationally deployed warheads and the formal U.S. withdrawal from the ABM treaty) are well known; the NPR report itself is not, as it was never released in an unclassified form.[20] In hindsight, many believe that the administration missed a big opportunity to engage Congress on a new vision for America's nuclear forces.

Conceptually, the NPR broke new ground in several areas. The United States would no longer plan, size, or shape its forces vis-à-vis Russia, enabling greater stockpile reductions. The review underscored the critical need to refurbish the nuclear weapons complex. It also unveiled a new concept for U.S. strategic forces and capabilities—the New Triad. The New Triad took the Old Triad, comprised of intercontinental ballistic missiles, submarine-launched ballistic missiles, and bombers and placed them within a broader portfolio of strategic capabilities: strike (nonnuclear and nuclear), defense (active and passive), and a responsive nuclear infrastructure. The legs are integrated through command, control, communications, computers, intelligence, surveillance, and reconnaissance.

Iranian President Mahmoud Ahmadinejad visits Natanz Uranium Enrichment Facility

AP/Wide World Photo

Although the Nuclear Posture Review put the United States on a more sound policy footing, it failed to create the political foundation or generate the debate, particularly in Congress, for implementing that policy. The report itself also undercut both the credibility of the nuclear deterrent and the rationale for modernizing U.S. nuclear forces by "mainstreaming" nuclear weapons, making them merely one of several offensive "strategic capabilities" despite their unique destructive properties and strategic role. The New Triad offensive forces include conventional, nonkinetic (that is, cyberwarfare), and nonconventional (that is, nuclear forces). The effect of this downgrading has been a continuation of the neglect of things nuclear. This should not have been surprising since Secretary Rumsfeld, in his cover letter to the report, stated or implied six times that one of the principal virtues of the NPR is that it reduced U.S. reliance on nuclear weapons. If this is the kind of advocacy that nuclear weapons received in a "nuclear posture review," it is not hard to envision how weakly they are advocated when they are "mainstreamed" with other capabilities in DOD's constant competition for defense dollars.

the Nuclear Posture Review undercut both the credibility of the nuclear deterrent and the rationale for modernizing U.S. nuclear forces by "mainstreaming" nuclear weapons

Assuming some nuclear weapons remain in the world, the United States must have them, and the threat of retaliation must be credible. Having a credible nuclear deterrent requires having a military that is *serious* about sustaining its nuclear capability, strategy, and doctrine. The prevailing view in today's military, where the operational perspective of the "warfighter" is dominant, is that nuclear weapons lack utility because they are not "useable," which renders them not "interesting" (particularly from a career perspective) and perceived to be not "needed" (since the United States is the world's only conventional superpower).

The views of General James Cartwright, USMC, U.S. Strategic Command (USSTRATCOM) commander from July 2004 to August 2007, are both illustrative and illuminating. In advocating that a conventional missile be substituted for a nuclear-tipped missile on the Trident submarine, General Cartwright made the following statements to Congress in early 2007:

We have a prompt delivery capability on alert today, but it is configured with nuclear weapons, which limits the options available to our decisionmakers and may reduce the credibility of our deterrence.[21]

A few weeks later, he further told Congress:

[W]*e lack the capability to respond promptly to globally dispersed or fleeting threats without resorting to nuclear weapons. As good as they are, we simply cannot be everywhere with our general-purpose conventional forces, and use of a nuclear weapons system in prompt response may be no choice at all.*[22]

If reliance on nuclear weapons weakens deterrence, then nuclear capabilities, by definition, are not very useful. In one of his first extensive interviews after becoming Vice Chairman of the Joint Chiefs of Staff, General Cartwright "called the notion of a temptingly low-yield [nuclear] weapon—generally defined as 1 to 10 kilotons—a 'good academic argument,' one 'that deals more with the 'what if'" and went on to say:

None of them [policy advocates of low-yield nuclear weapons] *have had the responsibility or the accountability* [to launch such weapons]. . . . *it is not just a little bit* [of] *a weapon of mass destruction. It is going to change not just that country's future, but all of our futures when we start using these things, big or little.*[23]

Although General Cartwright is clearly one of the most respected and influential leaders of today's military, these statements make one long for the "bad old days" of the Cold War when our nuclear deterrent was "strong," in part because we drew clearly articulated lines determining the suitability of nuclear retaliation that underscored the unique role played by nuclear forces. "Mainstreaming" our nuclear deterrent in DOD has devalued it, and its credibility is further undermined by our military practitioners believing what our political leaders said after the last time they threatened to use nukes—"we didn't really mean it."

Although the 2001 QDR included deterrence as one of the four defense policy goals, along with assurance, dissuasion, and defeat, the Bush administration paid little attention to deterrence during its first term because the post-9/11 salient nuclear threat was from terrorist acquisition and use.[24] Vice President Cheney stated at the Heritage Foundation in October 2003:

The strategy of deterrence . . . will no longer do. Our terrorist enemy has no country to defend. No assets to destroy in order to discourage an attack. . . . There is only one way to protect ourselves . . . to destroy the terrorists before they can launch further attacks against the United States.[25]

Not only was preemption the preferred strategy for dealing with nuclear terrorism, but preventive war was also the strategy for dealing with the threat of "unbalanced dictators" armed with nukes. Of course, going to war to prevent Saddam Hussein from getting nuclear weapons conveyed our belief that we would have been deterred if he had gotten them—implicitly conceding that threats of nuclear retaliation cannot dissuade the pursuit of these capabilities. Similarly, repeated statements by midlevel DOD officials during the first Bush administration that the United States needs new nuclear capabilities that are low collateral, lower yield, and more accurate to ensure that its nuclear deterrent remains credible raise an obvious question: what happens to the credibility of our nuclear deterrent—to ourselves, our allies and friends, and our adversaries—if there are no new nuclear capabilities?

Deterrence made a comeback during the Bush administration's second term when the concept of "tailored deterrence" was adopted in the 2006 QDR Report. Keith Payne, noted deterrence theorist and a deputy assistant secretary of defense during the 2001 NPR, set forth the "mandate for tailored deterrence" in March 2004:

[D]*eterrence threats based on the generally high yields of the Cold War arsenal may not appear credible, given the excessive civilian destruction likely to occur. . . . Clearly, some reasonable and much needed steps to better align U.S. deterrence policy to the realities of the new era include broadening*

U.S. deterrent threat options . . . seeking an understanding of the opponents' intentions and the flexibility to tailor deterrence to specific requirements of foe, time, and place.[26]

The 2006 QDR defined *tailored deterrence* in the New Triad context as the "forces and capabilities needed for deterrence, reflecting a shift from 'one size fits all' deterrence toward more tailorable capabilities to deter advanced military powers, regional WMD states or non-state terrorists."[27] The most significant shortcoming embedded in this definition, *from the perspective of the U.S. nuclear deterrent*, was the continued "mainstreaming" of things nuclear inside DOD and the application of "tailored deterrence" to "nondeterrable" nonstate terrorists.

going to war to prevent Saddam Hussein from getting nuclear weapons conveyed our belief that we would have been deterred if he had gotten them

The first steps in any recovery program are understanding and taking ownership. Resuscitating the U.S. nuclear deterrent must begin with the recognition that nuclear weapons are unique capabilities and play unique roles in both warfare and international affairs. That the United States needs a nuclear deterrent in the post-9/11 era is self-evident:

- Deterring nuclear attacks against the United States is still a first order requirement. Nation-states still possess nuclear capabilities that threaten our very existence (Russia today, perhaps China tomorrow) and can inflict "unacceptable damage" (any state that has nuclear weapons).
- U.S. allies and friends that do not possess nuclear weapons depend on our extended nuclear deterrent. The State Department's International Security Advisory Board stated flatly: "There is clear evidence in diplomatic channels that U.S. assurances to include the nuclear umbrella have been, and continue to be, the single most important reason many allies have foresworn nuclear weapons."[28]

The classic deterrence question has always been "deter *whom* from doing *what* against *whom*." How far the U.S. nuclear deterrent could be "extended" beyond direct nuclear threats to the United States will continue to be the subject of great debate in the post-9/11 era. The discussion sparked by the "new" concept of tailored deterrence has already enhanced our understanding of deterrence. M. Elaine Bunn of the Institute for National Strategic Studies, for example, argues persuasively that the credibility of our deterrent depends, inter alia, on our *communications*, defined as "the kinds of messages the United States would send in its words or actions that contribute to (or detract from) its efforts to deter specific actors, in both peacetime and crisis situations."[29] The imperative for making the nuclear mission a top priority for DOD is indisputable: nuclear weapons exist, numerous nation-states possess them, more nation-states are likely to acquire them, and the risk that nuclear weapons will be used is growing.

Organizing the Mission

In Washington, effective policy representation of any issue requires organizational and bureaucratic stature. Over the past 15 years, the bureaucratic actors focused on nuclear weapons have either disappeared or been incorporated (that is, mainstreamed) into other agencies. Moreover, the time and attention devoted to nuclear issues by senior policymakers—the scarcest resource in official Washington—has precipitously declined. The "nuclear suitcase" still follows the President around, but this appears to most as an anachronism of the Cold War rather than an indicator of current strategic priorities.

Who is involved in the nuclear mission? Nuclear weapons are really the "President's weapons"—no other military capability requires the explicit approval of the President before it can be employed for any purpose. DOD executes the nuclear mission for the President. USSTRATCOM, under the authority of the President and the Secretary of Defense, generates the requirements for nuclear weapons, plans for them, and would conduct any operations involving them. The Navy and Air Force provide delivery systems for nuclear weapons and personnel trained in the planning and conduct of nuclear operations. The National Nuclear Security Administration (NNSA) oversees the national laboratories, production plants, and testing facilities that provide nuclear warheads to DOD. During the height of the Cold War, the nuclear mission was clearly top dog, as DOD withheld forces from other missions to ensure that it could exercise the Single Integrated Operating Plan at a moment's notice. Today, however, the nuclear mission has fallen on hard times.

The recent history of USSTRATCOM illustrates how far the nuclear mission has declined in organizational status. On October 1, 2002, U.S. Space Command was merged into USSTRATCOM, and since that time the nuclear mission has been increasingly diluted as new responsibilities have been incorporated. By 2006, USSTRATCOM had assumed responsibility for command and control of strategic forces, global strike, military space operations, computer network operations, information operations, global intelligence, surveillance and reconnaissance, strategic warning and intelligence assessments, and combating weapons of mass destruction.[30] In the summer of 2002, the highest ranking individual at USSTRATCOM who thought about nothing but nuclear issues was its four-star commander; today, it is a retired lieutenant colonel who heads up the Nuclear Command and Control Office (the only place where the word "nuclear" appears on the USSTRATCOM organizational chart).[31] That is five levels down the bureaucratic food chain in less than 4 years.

This post–Cold War loss of organizational status was echoed on the civilian side of the house in DOD. At the end of the Cold War, the Office of the Secretary of Defense's assistant secretary for international security policy focused largely on nuclear issues; now, it is one of several accounts for the deputy assistant secretary of defense for strategic forces. The Defense Nuclear Agency (DNA) served over the years (in several different incarnations) as the Secretary's principal technical advisor for nuclear weapons. By 1998, the DNA had become the Defense Threat Reduction Agency, which has a broad anti-WMD mandate, with DNA's original role as the civilian nuclear proponent inside DOD taking (at most) tertiary priority.

The organizational decline of the nuclear mission in the military Services has been almost as dramatic. In January 1997, then chief of staff of the Air Force, Ronald Fogelman, created an office (AF/XON) headed by a two-star general in order to have a single button on the Air Staff for nuclear issues. Today, that office no longer exists, and the highest ranking Air Force officer in the Pentagon with responsibility

for nothing but nuclear matters is a colonel. Members of the nuclear community within both Services privately express the belief that their Services would divest themselves of the nuclear mission in a heartbeat if they would not lose force structure. The Air Force's recent Bent Spear incident, in which six nuclear-armed cruise missiles were left unattended for 36 hours while being flown from one air base to another,[32] raises the disturbing issue of how much the nuclear mission's decline has eroded the "nuclear competence" of the military Services. Subsequently, following the revelation that the Air Force and Defense Logistics Agency had mistakenly sent four nuclear fuses to Taiwan, the Air Force failed a security inspection at Minot Air Force Base.

over the past 15 years, the bureaucratic actors focused on nuclear weapons have either disappeared or been incorporated into other agencies

The cumulative effect of these incidents led Defense Secretary Robert Gates to fire the secretary and chief of staff of the Air Force.

U.S. nuclear warheads, and the infrastructure that supports their design and production, have suffered from post–Cold War benign neglect. The nuclear enterprise is currently behind on virtually every task assigned to it, from stockpile surveillance to weapons dismantlement (although the situation has improved in the last year). Perhaps worse, the workforce continues to age, as the retirement of experienced designers creates an ominous gap in the Nation's nuclear weapons design knowledge. The last warheads the United States produced were designed in the 1970s, assembled during the 1980s, and were intended to last 10 to 15 years.

During the Cold War, confidence that U.S. nuclear weapons would perform as advertised was attained through rigorous nuclear testing. These tests, which both identified and rectified problems in the nuclear warhead, were designed to test nuclear yield, not the effects of weapon longevity. To replace testing as a means of sustaining confidence in the stockpile, the United States embarked on the Science-based Stockpile Stewardship Program, a costly ($2 billion–$3 billion per year), technically complicated program relying heavily on computer simulations. Although the national laboratory directors and USSTRATCOM commander continue to give Congress annual certifications of the reliability of the nuclear stockpile, the uncertainty associated with certifying decades-old systems without testing has led NNSA to preserve the ability to conduct underground tests in the event of unforeseen problems.[33]

The decay of the U.S. nuclear enterprise is met with increasing apathy—and at times, antipathy—inside the Beltway. Although Secretary Gates, by his recent actions that include firing Air Force leadership and establishing the Schlesinger Commission to examine nuclear stewardship in the Air Force and DOD, has started to reverse this process. During the Cold War, nuclear issues often turned national elections (for example, the so-called missile gap in 1960) and consumed Congress (for example, alternative basing schemes for the Peacekeeper missile). Today, there are "mini-debates" about specific programs, such as the study of the Robust Nuclear Earth Penetrator (RNEP), but no discussion of the overall strategy and role for U.S. nuclear forces. The "inside the Beltway" nuclear allergy has become so strong that one prominent legislator privately offered in early 2005, "Take the word 'nuclear' out of RNEP and we'll give it to you" (which was done).

Resuscitating the credibility of the U.S. nuclear deterrent in an era of nuclear multipolarity requires that Washington gets serious about its nuclear strategy, policy, and force posture. Since nuclear weapons belong to the President, leadership on these issues must start at the top and become a key priority for the next administration.

The lack of serious attention to nuclear matters by senior leadership in the Pentagon and the organizational decline of the nuclear mission must be undone. Since nuclear weapons are unique and special capabilities, they need the same approach as that given to special operations forces. In the case of special operations, it was repeated operational failures (particularly *Desert One*) that gave political impetus to the creation of U.S. Special Operations Command. We cannot afford similar failures in the nuclear realm. It is time to go "back to the future" and establish a U.S. Nuclear Forces Command that *could* have (pending further analysis) the following attributes:

- established as a subordinate command in USSTRATCOM and headed by a three-star general or admiral; like other combatant commands, this U.S. Nuclear Forces Command would function as a standing joint task force
- provided with budget and acquisition authority (including a Major Force Program for nuclear capabilities)
- supported by NNSA and a smaller, rationalized complex focused solely on the nuclear mission; would end DOE risk-averse micromanagement of the nuclear complex and leave it to focus on nuclear energy; would consolidate work on the nuclear warhead at one of the national laboratories and "other" activity (non-weapons work) at the other laboratory (which could stay with DOE).

To ensure that the President and Secretary of Defense receive the necessary support on nuclear matters, the President needs a National Security Council special assistant for nuclear issues (to help integrate and harmonize nuclear policy, including communications, across the U.S. Government), and the Secretary of Defense needs a congressionally confirmed assistant secretary for nuclear matters (to provide effective advocacy inside the Pentagon).

A stockpile designed for a 1980s threat is not relevant to today's challenges. Getting serious about nuclear weapons means *doing* things with them—thinking about them, producing them, deploying them, and exercising with them so threats to employ them will be taken seriously. It also will require some straight talk to the international community, telling them that, like *all* other nuclear weapons states, the United States has no intention of getting rid of its nuclear weapons for the foreseeable future. This deliberately active approach is the only way to resuscitate the nuclear deterrent. And it is far better for the United States to have a credible nuclear deterrent than to feel compelled to employ a nuclear weapon because its nuclear deterrent failed. **JFQ**

Jessica M. Yeats of CSIS prepared this article.

NOTES

[1] Sir Michael Quinlan, "Talking Points with Admiral Richard Mies," *Capitol Hill Quarterly* 1, no. 2 (July 2006), 3.

[2] Thomas P.M. Barnett, "Peace Provided by Nuclear Weapons," *Knoxville News-Sentinel*, September 9, 2007, available at <www.knoxnews.

com/news/2007/Sep/09/barnett-peace-provided-nuclear-weapons/>.

[3] See Hisahiko Okazaki, "Time to Consider a Nuclear Strategy," *Yomiuri Shimbum*, April 8, 2007, and articles on March 21, 23, 24, and 26, 2007, in *The Daily Yomiuri*.

[4] See Tim Tae-Gyu, "Seoul Can Build A-Bombs Within 1 Year," *The Korea Times*, October 17, 2006, and "Seoul Has Tech for Making Weapons-Grade Uranium," *The Korea Times*, October 18, 2006.

[5] "Chain Reaction: Avoiding a Nuclear Arms Race in the Middle East," Senate Foreign Relations Committee print, February 2008, 36, 37.

[6] Department of Defense (DOD), 2006 *Quadrennial Defense Review Report* (2006 QDR Report) (Washington, DC: DOD, February 6, 2006).

[7] Office of the Secretary of Defense, *Annual Report to Congress: Military Power of the People's Republic of China 2007*, "Chapter 4: Force Modernization Goals and Trends," available at <www.defenselink.mil/pubs/pdfs/070523-China-Military-Power-final.pdf>.

[8] See Stephen Peter Rosen, "After Proliferation," *Foreign Affairs* 85, no. 5 (September/October 2006).

[9] Center for the Study of Weapons of Mass Destruction, National Defense University, "The Future Nuclear Landscape: New Realities, New Responses: Key Themes" (May 2006), 3.

[10] *The National Security Strategy of the United States of America* (Washington, DC: The White House, March 2006), 27; DOD, 2006 QDR Report, 49.

[11] Thom Shanker and Norimitsu Onishi, "Japan Assures Rice That It Has No Nuclear Intentions," *The New York Times*, October 19, 2006, A14.

[12] DOD, "The 38th Security Consultative Meeting Joint Communiqué," October 20, 2006, available at <www.defenselink.mil/news/Oct2006/d20061020uskorea.pdf>.

[13] David E. Sanger and Thom Shanker, "Washington Sees an Opportunity in Iranians' Defiance," *The New York Times*, September 27, 2007, A6.

[14] Kenneth M. Pollack, "A Last Chance to Stop Iraq," *The New York Times*, February 21, 2003, A27.

[15] George H.W. Bush and Brent Scowcroft, *A World Transformed* (New York: Knopf, 1998), 463.

[16] Colin L. Powell, *My American Journey* (New York: Random House, 1995), 486.

[17] Office of Assistant Secretary of Defense (Public Affairs), "DOD Review Recommends Reduction in Nuclear Force," News Release No. 541–94, September 22, 1994.

[18] The Nuclear Information Project, *The 1994 Nuclear Posture Review*, Nuclear Brief, July 8, 2005, available at <www.nukestrat.com/us/reviews/npr1994.htm>.

[19] President George W. Bush, remarks by the President to Students and Faculty at National Defense University, May 1, 2001, available at <www.whitehouse.gov/news/releases/2001/05/20010501-10.html>.

[20] Portions of the 2002 Nuclear Posture Review report were leaked and posted on Web sites around the globe, often without the broader political context that framed the report's key conclusions. This undoubtedly generated undue skepticism toward the administration's nuclear initiatives. See Globalsecurity.org, "Nuclear Posture Review [Excerpts]," Weapons of Mass Destruction (January 8, 2002).

[21] Statement of General James E. Cartwright, USMC, Commander, U.S. Strategic Command, before the Strategic Forces Subcommittee, House Armed Services Committee, on U.S. Strategic Command, March 8, 2007.

[22] Statement of General James E. Cartwright, USMC, Commander, U.S. Strategic Command, before the Energy and Water Development, and Related Agencies Subcommittee, House Committee on Appropriations, on U.S. Strategic Command, March 29, 2007.

[23] Elaine M. Grossman, "Senior U.S. General Sees High Nuclear Threshold," Global Security Newswire, October 22, 2007, available at <www.nti.org/d_newswire/issues/2007_10_22.html#58872303>.

[24] Elbridge Colby, "Restoring Deterrence," *Orbis* 51, no. 3 (Summer 2007), 413–414.

[25] The White House, remarks by the Vice President to the Heritage Foundation, October 10, 2003, available at <www.whitehouse.gov/news/releases/2003/10/20031010-1.html>.

[26] Amy F. Woolf, "Nuclear Weapons in U.S. National Security Policy: Past, Present, and Prospects," CRS Report for Congress (October 29, 2007), 11.

[27] DOD, 2006 QDR Report, 4, 48.

[28] International Security Advisory Board, *Report on Discouraging a Cascade of Nuclear Weapons States*, October 19, 2007, 23.

[29] M. Elaine Bunn, *Can Deterrence Be Tailored?* Strategic Forum No. 225 (Washington, DC: National Defense University Press, January 2007), 1.

[30] Command Historian's Office, U.S. Strategic Command, "History of the United States Strategic Command, June 1, 1992–October 1, 2002," January 2004, 71–76.

[31] Close observers of the Omaha-based command, while noting that General Cartwright had an excellent command of nuclear issues, estimate privately that USSTRATCOM's senior leadership spends about 5 percent of their time on nuclear issues.

[32] Joby Warrick and Walter Pincus, "The Saga of a Bent Spear," *The Washington Post*, September 23, 2007, A01.

[33] See Testimony of Linton F. Brooks, National Nuclear Security Administration, before the Strategic Forces Subcommittee, House Armed Services Committee, March 2, 2005.

The New Threat of Unconventional Warfare

By ALBERT J. MAURONI

Current discussions on the nature of nuclear, biological, and chemical (NBC) warfare inevitably lead to the popular statement that the potential terrorist use of chemical and biological warfare agents, radiological "dirty bombs," and nuclear (CBRN) devices represents the greatest threat to Western civilization.[1] There is little, if any, discrimination made between the military application of NBC weapons by a nation-state such as North Korea or Pakistan and the terrorist application of CBRN hazards against noncombatant targets, despite the disparity in mass, sophistication, and impact of the two threats. Eleven of the 15 Department of Homeland Security (DHS) scenarios feature the adversarial use of a CBRN device or threat against the U.S. population, often with greatly exaggerated casualties and economic impact.[2] They are, without question, worst-case scenarios, designed more to stress decisionmakers by proposing numerous "what-if" cases than to seriously develop operational capabilities and allocate appropriate resources.

This intentional mirroring of nation-state capabilities onto terrorist organizations has been driven largely by the events of September 11, 2001, and the tone of the White House's *National Strategy to Combat Weapons of Mass Destruction*.[3] Because of the 9/11 event, many analysts believe that the natural inclination of terrorists will be to escalate from the use of conventional munitions to military-grade chemical-biological (CB) warfare agents and even tactical nuclear weapons.[4] These military-grade agents and technologies will, according to the National Strategy, come from rogue nations who have (or intend to develop) a weapons of mass destruction (WMD) program. These two issues have unnecessarily caused the counterproliferation and counterterrorism communities to come to blows over policy direction. Although one could argue that terrorists' statements and attempts to use crude

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National Guard Bureau officials observe civil defense exercise by Israeli Homefront Command and civilians in Nazareth, Israel

U.S. Army (Jim Greenhill)

industrial chemicals represent "intent," there have been no cases of the successful terrorist use of military-grade CB warfare agents, radiological "dirty bombs," or stolen nuclear weapons with the end result being a mass casualty event.

There are constant debates on how the United States should respond to a nation-state's or terrorist organization's actual employment of a CB hazard or weapon. What if a terrorist CB incident does not cause mass casualties, as with the 2001 anthrax attacks in the United States? Assuming that we have the forensics capability to assign attribution to a particular country or organization, then what? Are we clear on the culpability of that nation? Should the U.S. Government respond to a military CB weapons attack against our forces with a nuclear weapon, regardless of whether or not the state is a nuclear power? Ironically, many of the same people and organizations who advocate the use of nuclear weapons as a retaliatory tool against CB warfare incidents are often the same ones who dismiss the idea that CB weapons represent a true WMD capability equivalent to nuclear weapons.

Military analysts and academics have failed to examine the technological evolution of NBC weapons (and CB weapons in particular) against the development of military strategy over the course of history. They apply the Cold War model to past, current, and future employment of CB weapons, viewing any and all chemical or biological weapons use or terrorist incidents as large area, mass casualty events. For example, note the recent cases of analysts identifying terrorist-employed chlorine as a WMD merely because it was once used as a chemical weapon in 1915. This application of the Cold War model ignores the type or amount of CB warfare agent, the delivery system, the purity of the agent, and a host of other factors required for a successful CB weapons attack. That process has resulted in the stagnation of ideas and concepts on how the United States ought to address the threat of terrorist CBRN incidents.

If we examine the changing nature of military operations over time and apply the same rigor to the evolution of NBC weapons, we might discover that the future threat is much more manageable than the so-called experts would have us believe. In 1989, the concept of fourth generation warfare was developed in an article in the *Marine Corps Gazette*.[5] This concept has matured over the years, and others have elaborated on it in detail. The basic discussion separates the history of military warfare into four distinct and overlapping phases, none of them involving a sudden transformation in military affairs. Each generation required changes in politics, economics, society, and technology to create the basis for a new mode of warfare.[6] This concept is also applicable to the discussion of how the U.S. Government ought to view and address NBC warfare and terrorist CBRN incidents. The generations are:

the Cold War model ignores the type or amount of chemical-biological warfare agent, the delivery system, the purity of the agent, and other factors required for a successful attack

First generation CB warfare (1675 to the early 1800s). Most efforts were relatively crude prior to the emergence of chemistry and biology as formal academic fields but did represent an initial effort to employ CB warfare against massed forces.

Second generation CB warfare (early 1800s to 1918). British and American forces examined the potential of filling artillery shells with toxic industrial chemicals. This later developed into the heavy but inefficient use of industrial chemicals on the battlefields of World War I.

Third generation NBC warfare (1918 to 1995). The deliberate design, production, storage, and employment of CB warfare agents clearly distinguish this period. While nuclear weapons have no first or second generation lineage, certainly their development and employment fit in the third generation model.

Fourth generation NBC warfare (1995 to the present). Future terrorist CBR incidents will be single attacks with limited casualties, intended to disrupt specific government or commercial activities and create wide-scale panic and economic chaos. Future state use of CB weapons will be focused on disruption of fixed sites and critical infrastructure.

The clash between the counterproliferation and counterterrorism communities can be directly sourced to the failure to recognize that the fourth generation model has overtaken the Cold War model for unconventional, as well as conventional, warfare.

"Generational" Warfare

Over the course of military history, NBC warfare has changed significantly. Military organizations have thought about the application of chemical and biological hazards in support of combat operations for centuries. Most modern treatises on CB warfare open with discussions on how early military forces used poisoned arrows or diseased animal carcasses to increase the lethal impact of their operations against adversarial forces or cities. These ungoverned efforts were relatively unsophisticated because they developed prior to the advent of chemistry and biology as formal academic fields in the late 19th century. They did, however, represent an initial effort by nation-states to employ CB warfare weapons against massed forces. Recognizing this trend, France and Germany signed the Strasbourg Agreement in 1675 to outlaw the use of poisoned bullets.

As military forces developed into the second generation of warfare, nations recognized the potential of toxic chemicals and contagious biological organisms. There is the story about British troops infecting American Indians with smallpox as a tactic to diminish their forces.[7] Both British and American forces examined the potential of filling artillery shells with toxic chemicals during the 1850s and 1860s but did not further develop the concept. These innovative efforts directly led to early arms control attempts at the end of the 19th century to "prohibit the use of projectiles the only object of which is the diffusion of asphyxiating or deleterious gases."[8] The birth of modern chemical warfare began in 1915 as the nations of Europe used advanced knowledge of industrial manufacturing, engineering, and chemistry not only to develop new chemical warfare agents, but also to store, transport, and employ them in mass effects to affect broad swaths of the battlefield. General John Pershing later noted that "gas was a significant weapon, but not as a producer of battle deaths."

The events of World War I led to another treaty prohibiting the "first use" of chemical weapons in 1925, but major powers continued to develop military CB warfare capabilities throughout World War

II and the Cold War period. The United States invested in a massive infrastructure to research, develop, test, evaluate, produce, distribute, and employ CB warfare agents, an effort second only to the Manhattan Project. Although CB weapons were not employed by the two superpowers, certainly operational and strategic employment concepts were actively developed. There are only a handful of cases where these weapons have been successfully employed by nation-states, but these all fit the "industrial warfare" model of third generation warfare. The earlier concept of using CB weapons solely against military forces changed to consider operational employment against noncombatants (1930s, China and Ethiopia; 1940s, World War II; 1960s, Yemen; 1970s, Vietnam; 1980s, Iran and Iraq) as a means to achieve national objectives. The third generation peaked with the use of nuclear weapons at Hiroshima and Nagasaki and continued with four decades of arms control efforts attempting to restrict and roll back the use of NBC weapons against both combatants and noncombatants. This period was when weapons of mass destruction programs flourished.

Throughout history, a military's ability to employ NBC weapons was directly affected by the operational concepts of the day, the national leadership's willingness to employ such agents, and the technical ability to deliver these weapons against an adversary or noncombatant target. The lack of mature industrial development of CB weapons limited forces to using improvised CB hazards during first generation warfare. The low appreciation for the potential of CB warfare agents and limited research and development into delivery systems restricted their use during the second generation, but the general concepts for CB warfare were established. The third generation of warfare saw the full industrial mobilization of nation-state capabilities to develop and refine CB warfare agents, leading to the creation of nuclear posture reviews supporting massive force-on-force strategic analyses. As military operators and civilian scientists joined forces to develop this unconventional capability, the modern employment of NBC weapons was possible. But what about the future?

Fourth Generation

Politicians, arms control organizations, law enforcement officials, and defense leaders have all liberally used the term *WMD* to discuss CB warfare capability, whether it be a gram of anthrax in a letter or North Korean ballistic missile tests. As long as the weapons system (improvised or engineered) had an NBC component, it was a WMD capable of causing mass casualties. What agent was used, how much agent was used, against what target it was used, for what purpose—none of that was relevant. This is a classic third generation mindset, focusing on outdated scenarios of the planned heavy and sustained use of NBC weapons against operational forces and/or strategic targets. Although this mindset was appropriate from 1945 to 1990, it became increasingly irrelevant with the advent of terrorist CBRN hazards.

Here are the facts: the United States and Russia have publicly abandoned the development of CB warfare agents and have committed to destroying their stockpiles of chemical munitions and production plants. The number of CB warfare–capable countries has actually decreased since the 1950s, and of those countries suspected of developing NBC weapons, none come close to the two superpowers' former unconventional weapons programs. At best, these nations might be able to inflict a few thousand casualties on a prepared military force prior to exhausting their stockpile. Nations that do develop NBC weapons do so because they have adversarial, aggressive neighbors (who, in turn, develop similar unconventional capabilities), because modern weapons systems are increasingly expensive, and because they lack the resources for long campaigns.

The most popular rationale for the decline in national WMD programs is that the international community has a moral "repugnance" for NBC weapons, or at the least, that nation-states recognize that the international community's backlash from developing and using these weapons will be significant. This weak rationale pales in the political reality of the lack of action by any nation-state to Iraq's use of chemical weapons against Iran in the 1980s. Others will argue that CB weapons are ineffective against trained military forces and therefore are of little value in modern combat. This argument assumes (incorrectly) that nation-states keep their troops trained and equipped for such a threat (consider past General Accounting Office assessments of U.S. force readiness).[9] There is a much simpler answer: many nation-states have recognized that their national security goals have changed and no longer require the massive use of NBC weapons.

although CB weapons were not employed by the two superpowers, operational and strategic employment concepts were actively developed

Chemical-biological weapons were created to impact operational-level conflicts, intended to degrade an opposing force's warfighting capabilities. Correctly employed, they are silent, fast-acting, and can cover a large area, aiming to incapacitate or reduce large, fielded military forces. But like high explosives, one requires a significant amount of CB munitions to affect a large target, if one desires to significantly influence combat operations. Two recent events changed this calculus. First, the Cold War ended, reducing the possibility of superpower conflict that might escalate to the heavy use of unconventional weapons. Second, militaries have gained access to increasingly accurate precision munitions. With so-called smart bombs, it is no longer necessary to blanket an area with conventional or unconventional munitions to achieve a desired military effect. The dramatic increase in the ability to target and destroy a particular

Canadian soldier with mustard gas burns, ca. 1917–1918

Library and Archives Canada (W.L. Kidd)

military system or complex with conventional munitions effectively drove away the need for CB munitions. It was never about the "morality" of CB weapons; it was about efficiencies and advocacies.

CB weapons may still have a role in future combat for some nations, but they will not be used to cause mass casualties, nor will nation-states need to produce and stockpile them in large quantities. Nation-states will use CB weapons stockpiles either to deter aggressive neighbors from attacking or (lacking access to expensive precision munitions) to reduce the time and cost of conventional combined arms operations aimed against their neighbors. Used in relatively small numbers, these weapons could temporarily disrupt military and commercial activities (especially critical infrastructures such as headquarters, communication sites, air bases, seaports, and major logistics sites) to the point where the effects of conventional tactics will be significantly multiplied. Massive use of CB weapons to incapacitate and/or destroy a large standing military force or to attack population centers is no longer a desired capability, given the probable desire to minimize the chance of international intervention into regional conflicts.

For instance, North Korea is believed to own a large stockpile of CB weapons and delivery systems that can easily range Seoul and U.S. forces in forward bases within South Korea. American and South Korean military forces maintain and practice CB defense capabilities as well as significant air/missile defense and offensive strike capabilities within their military exercises. The South Korean government has issued protective masks to its citizens and exercised civil defense drills. What, then, is the value of an offensive CB weapons program to North Korea? The official role, as claimed by the North Korean government, is to augment its defense against a U.S.-led coalition attack into its region. If North Korea decided to use CB weapons during an invasion of South Korea, direct casualties from CB weapons would be minimized as a result of active and passive defenses. CB weapons use would, however, create operational advantages in the opening phase of combat by degrading military force capabilities at key terrain points and by reducing operational tempos at critical air bases and seaports.

the increase in the ability to target and destroy a particular military system or complex with conventional munitions drove away the need for CB munitions

Nations developing CB weapons do not view these unconventional munitions merely as tools to deter U.S. military actions or asymmetrically counter U.S. military strengths. If the two conflicts between the United States and Iraq have shown anything, it is that the threat of CB weapons will only delay, but not deter, U.S. military action.

Using the capabilities of a nation's limited CB stockpile against the deep and broad conventional and nuclear capabilities of the U.S. military is just not a feasible or logical threat; they know it, and our military leadership knows it. If one examines the list of nations suspected of possessing or developing CB weapons, there is a long history of conflict between these nations and their neighbors. It is natural to expect a country like Iran to seek a military advantage over traditional neighboring adversaries, to include the acquisition of unconventional weapons. These are not irrational actions.

Obviously nuclear weapons are the exception to this theory, but then again, nuclear weapons have always been the unique WMD. Only military forces consider them as having tactical or even operational utility; to politicians, arms control agencies, and heads of state, they have been and always will be strategic weapons, and therefore they have unique strategies and concepts. Although many agencies and talking heads will claim that the term *WMD* includes nuclear, biological, and chemical weapons, to top government officials it is really only nuclear weapons that count. The U.S. Government does not worry about Iran's or North Korea's CB weapons, as reflected by the utter lack of discussion on these topics in current meetings and conferences inside the Beltway. However, this does not exclude the mention of CB weapons, in an obligatory fashion, in official government statements and speeches. The Cold War concept of massive CB weapons employment, combined with arms control discussions on the impact of unconventional weapons, made them part and parcel of the WMD mythology.

Terrorists and insurgents have explored the concept of CB warfare since at least the 1970s, but there have been only a few instances where an actual capability to use military-grade CB warfare agents was demonstrated. One was Aum Shinrikyo's use of the sarin nerve agent in the Tokyo subway in 1995, which caused 12 fatalities and fewer than 1,000 casualties resulting from actual nerve agent exposure (as opposed to the oft-cited 5,000 "worried well"). The other was the 2001 case of anthrax being mailed to several media organizations and congressional offices, causing 5 fatalities and 17 infections. If one excludes the discrete use of CB warfare agents as assassination tools, all other cases of CB terrorism featured the improvised use of industrial chemicals and natural biological organisms against small population sets with no repeat attacks involving regeneration of basic starter materials. Although there have been many cases of smuggling or illicit sales of radioactive material, we have yet to see the first attempt by a terrorist group to employ a radioactive dispersal device (or dirty bomb), let alone a nuclear weapon.[10]

The tendency for nonstate actors to make do with improvised materials should not be a surprise. Certainly, actions to develop and improve improvised explosive devices (IEDs) in Iraq and Afghanistan have followed this trend, including the use of ton-containers of chlorine as part of vehicle-borne IEDs.[11] The nature of the global economy encourages nonstate actors to use dual-use materials as weapon

FBI

Anthrax-laced envelopes were sent to media and political figures after 9/11

components. Of course, terrorist organizations are interested in CBRN hazards, as the Intelligence Community's latest assessments state. But the Central Intelligence Agency assessments are very careful not to say CBRN *weapons* or loosely use the term *WMD*.[12] Terrorists read the papers and have noticed the frequent hysteria surrounding DHS exercises, "white powder" scares, and dirty bomb stories. They want to capitalize on any tactic that will paralyze Federal/state agencies and frighten the general populace. They do not require weapon-grades material and military delivery systems to accomplish those ends.[13] Commercially available industrial chemicals (in particular, toxic inhalation hazards), infectious and indigenous biological organisms, and radioactive isotopes are all readily available without calling upon a "rogue nation" for assistance.

Extrapolating the current trend of technologies and behaviors of these individuals, we can conclude that future terrorist CBR incidents (purposefully leaving off the *N*) will be single attacks with limited casualties, intended to disrupt specific government or commercial activities and create wide-scale panic and economic chaos. Many observers postulate that a terrorist group will use a nuclear device in an American city (if they ever obtain one), but this is not a plausible scenario, if only because the ability to procure, build, or steal a nuclear device is not trivial.[14] Conventional and improvised weapons are more readily obtainable, require little training or infrastructure, and deliver the desired results (global attention) while avoiding massive government attribution. Moreover, according to T.X. Hammes, the 2001 anthrax attacks (or future envisioned bioterrorist incidents) are a *fifth* generation threat, but he overemphasizes the potential impact and undervalues the adversary's intent.[15] Terrorist use of CB hazards fits much more accurately in his well-developed description of fourth generation warfare.

Given that future military trends suggest that adversarial use of NBC weapons will be minimal and focused on disruption of fixed sites and critical infrastructure, and an unemotional, logical view of terrorist CBRN intentions does not demonstrate a mass casualty capability, why is it that U.S. Government agencies and others continue to think of CB warfare in terms of the Cold War? It is simply this: they have failed to acknowledge that fourth generation warfare applies to NBC weapons and tactics just as much as it does to conventional weapons and tactics. To clarify, I am not stating that CB weapons are only a nuisance to be ignored as a modern threat (although other military and policy analysts seem to think so). Employment of CB weapons on the battlefield can have a significant operational impact, as seen at Caporetto in 1917, in Ethiopia in 1935, and during the Iran-Iraq war (1986–1988). On the other hand, homeland security scenarios involving terrorists using 10 kiloton nuclear devices and agricultural sprayers filled with anthrax against multiple U.S. cities have little rationale for serious consideration.

terrorists read the papers and have noticed the frequent hysteria surrounding DHS exercises, "white powder" scares, and dirty bomb stories

Because of the relative lack of actual NBC warfare cases throughout history, there is more supposition than actual experience available by which to analyze and predict how future state and nonstate players might

Florida Air National Guard Airmen and civilian first responders treat victims during mass casualty exercise

12th Fighter Wing (Shelley Gill)

employ these unconventional weapons. As a result, many studies and discussions on NBC warfare fixate on the toxic properties of those specific agents rather than the credible employment of the weapons systems in military and homeland security scenarios and their realistic effects on people (protected and unprotected), mission capabilities, and critical infrastructure. This directly leads to dire and unsubstantiated warnings about how grams of biological agent and drops of nerve agent can kill "millions." This exaggeration is not helpful to understanding future employment of NBC weapons and CBRN hazards.

At the end of the day, it may be that the future impact of NBC weapons—at least at the theater level of warfare—may be limited to merely amplifying the role of conventional weapons systems and tactics, at least when excluding the possibility of a strategic nuclear exchange. The use of unconventional weapons may or may not result in the success of a military campaign. Stephen Biddle, in his development of a model of combat operations, commented:

[T]*o understand WMD's military effects, one must explain conventional capability first. Regional mass destruction warfare would probably not shut down conventional operations by a great power: regional nuclear arsenals will probably be tiny for the foreseeable future, and most great powers train their troops to fight in chemical and biological environments. The nature of the fighting would change, perhaps drastically, as the combatants seek to cope with damage incurred and reduce vulnerability to further attacks. But most do this by modifying their conventional-war methods for the special conditions of WMD (e.g., by spreading out troops and supporting infrastructure).*[16]

Biddle has captured a key point here: unconventional weapons, while influencing the battle, do not necessarily win or halt conventional operations in and of themselves. This is an incredibly relevant point for national strategy policy and military concepts. The current development of the "combating WMD" strategy emphasizes interdicting the global shipment of WMD technology and material, taking out production and storage sites, intercepting WMD delivery systems, and planning the response to mass casualty events. This demonstrates a strategic level focus against a particular weapons system and distinct threat that is, in nearly all cases, going to be a limited factor in future battles.

Current and projected trends do not support the theory that the terrorist use of CBR hazards will result in mass casualty events. What we have seen, and will see in the future, are small-scale, single event incidents using improvised industrial hazards that may kill a handful and panic thousands. And yet the current national strategy to combat terrorist WMD is identical to that proposed for nation-state proliferation, based on the belief that terrorists are receiving material and technology from nation-state WMD programs. This has not been the case with Aum Shinrikyo, al Qaeda, or other terrorist groups. The continued focus on NBC weapons as a third generation warfare threat has paralyzed analysts' ability to accurately consider their effects to the point where the U.S. Government is spending billions of dollars on the wrong approaches.

The concepts of "generations of war," revolution in military affairs, and phases of military transformation are important to the study and development of military strategy and operational concepts. Certainly the case has been made that conventional warfare has evolved and changed over time; the question has to be asked, why has no one considered that the same has occurred to unconventional warfare? The current national policy of using nuclear weapons as an option to retaliate against CB weapons use is now understandably not executable under this theory. The strategy of deterrence will not work against a fourth generation actor employing CBRN hazards. These facts force us to revisit how NBC weapons will be used in the future so we will have the right capabilities and concepts to counter these dangerous weapons. **JFQ**

NOTES

[1] U.S. Department of State, "The Global Challenge of WMD Terrorism," in *Country Reports on Terrorism*, April 30, 2007, available at <www.state.gov/s/ct/rls/crt/2006/82737.htm>.

[2] Consider David Howe, "Planning Scenarios: Executive Summaries" (Washington, DC: The Homeland Security Council, July 2004), available at <www.globalsecurity.org/security/library/report/2004/hsc-planning-scenarios-jul04.htm>.

[3] *The National Strategy to Combat Weapons of Mass Destruction* (Washington, DC: The White House, December 2002), available at <www.whitehouse.gov/news/releases/2002/12/WMDStrategy.pdf>.

[4] The term *military-grade CB warfare agents or military CB weapons* refers to the development and intentional employment of military platforms engineered to deliver CB weapons (as identified in the Chemical Weapons Convention as Schedule 1 toxic chemicals or ITF–6A biological weapon threat list) in quantities calculated to create a significant operational effect. This is as opposed to the improvised use of industrial chemicals, indigenous biological organisms, or industrial radioactive isotopes by nonstate actors.

[5] See William S. Lind et al., "The Changing Face of War: Into the Fourth Generation," *Marine Corps Gazette*, October 1989, 22–26, available at <www.d-n-i.net/fcs/4th_gen_war_gazette.htm>.

[6] Thomas X. Hammes, *The Sling and the Stone* (St. Paul, MN: Zenith Press, 2004), 30–31.

[7] Peter d'Errico, "Jeffry Amherst and Smallpox Blankets," available at <www.nativeweb.org/pages/legal/amherst/lord_jeff.html>.

[8] See "Laws of War: Final Act of the International Peace Conference, July 29, 1899," available at <www.yale.edu/lawweb/avalon/lawofwar/final99.htm>.

[9] See, for example, General Accounting Office, "Chemical and Biological Defense: Soldiers Inadequately Equipped and Trained to Conduct Chemical Operations," May 1991; and "Chemical and Biological Defense: Observations on DOD's Risk Assessment of Defense Capabilities," October 2002.

[10] Although one may point to the Chechen-buried cesium-filled package discovered at Ismailovsky Park in 1995 as an example of the terrorist employment of a radioactive dispersal device, the fact remains that it did *not* go off. Nor have any other terrorist devices been discovered, at least by public accounts (Jose Padilla's case in point). As we all know, "close" only counts in horseshoes and nuclear bombs—not in unexploded and imagined radiological dispersion devices.

[11] Mimi Hall, "Chlorine bombs pose new terror risk," *USA Today*, March 23, 2007, available at <www.usatoday.com/news/washington/2007-04-23-chlorine-truck-bomb_N.htm>.

[12] Central Intelligence Agency, "Terrorist CBRN: Materials and Effects," available at <https://www.cia.gov/library/reports/general-reports-1/terrorist_cbrn/terrorist_CBRN.htm>.

[13] Many policy and intelligence analysts seem to believe that the growing availability of scientific technology, educational opportunities, and the global economy directly supports an increasing threat of terrorist CBRN incidents. This line of logic seems to avoid any discussion of terrorist intent, motives, and means.

[14] See Michael Levi, *On Nuclear Terrorism* (Cambridge: Harvard University Press, 2007). It is not a question of *when*, but *if* terrorists can develop and deliver a capability to cause mass destruction on an unprepared and unprotected citizenry.

[15] Thomas X. Hammes, "Fourth Generation Warfare Evolves, Fifth Emerges," *Military Review*, May-June 2007, 21–23.

[16] Stephen Biddle, *Military Power: Explaining Victory and Defeat in Modern Battle* (Princeton: Princeton University Press, 2004), 9.

Nuclear First Use
Prudence or Peril?

By STEPHEN J. CIMBALA

Open discussion of the possible first use of nuclear weapons, against terrorists or other targets, is becoming more acceptable in American, North Atlantic Treaty Organization (NATO), and Russian policy circles. Presumably intended on all sides as an example of rhetorical deterrence or reassurance, declaratory policies of nuclear first use or first strike carry prospective costs and risks. These costs and risks might increase if the spread of nuclear weapons, especially in Asia, is not contained within present boundaries. In addition, the unfortunate possibility of ambiguous lines between nuclear first use and first strike, and equally indistinct lines between preemption and preventive war, has the potential to turn one state's deterrent into another's provocation. Is nuclear first use, especially as a matter of declaratory policy, a necessary option or an unacceptable risk—or both?

Overtures

In the United States and Russia, 2008 is a Presidential election year. These events were foreseen. Less anticipated has been the upsurge in open discussion by Russian and NATO military leaders about policies with respect to the first use of nuclear weapons. Although some dismiss this rhetoric as repetition of past points about Russian or NATO doctrine, the frequency of public declamation on issues normally treated as internal military matters bears scrutiny.

In a speech at Russia's Academy of Military Sciences on January 19, 2008, General Yuri Baluyevksy, chief of the general staff of the Russian armed forces, noted that Russia would use its military power to uphold its interests in a variety of situations. He emphasized that, if necessary, Russia would strike preemptively, not excluding the possible use of nuclear weapons in a first strike. According to Baluyevsky, "We are not going to attack anyone, but we want all our partners to realize that Russia will use armed force to defend its own and its allies' sovereignty and territorial integrity. It may resort to a pre-emptive nuclear strike in cases specified by its doctrine."[1]

Experts immediately cautioned that Baluyevsky was restating the "traditional" position of Russia since the end of the Cold War and that the message was consistent with the 2000 military doctrine of the Russian Federation. In contrast to the Cold War declaratory policy of the Soviet Union, Russia's military doctrine includes the option of nuclear first use or first strike in a conventional war involving attacks on Russian state territory or otherwise threatening to Russia's vital interests.

On the other hand, it was possible to interpret Baluyevsky's statement as a more assertive affirmation of the right of nuclear first use than hitherto made by Russia's military command. The question remained open with respect to the particular circumstances of an attack and how Russia would define its "interests" and "sovereignty" as having been affected. Former Russian defense minister Sergei Ivanov reportedly considers as quite defensible the carrying out of presumably preemptive or preventive nuclear strikes against terrorists. Other

Nuclear fireball from 23-kiloton test detonation, Nevada Test Site, 1953

Department of Energy

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high ranking Ministry of Defense officials have also discussed this option.[2]

Similar discussions about nuclear preemptive or preventive attacks have been taking place in Western circles. In a report prepared by five prominent former U.S. and allied NATO generals calling for "root and branch" reform of the Alliance, the authors contend that NATO must be ready to resort to a preemptive nuclear attack to halt the "imminent" spread of nuclear and other weapons of mass destruction.[3] The authors—including retired General John Shalikashvili, former Chairman of the Joint Chiefs of Staff and former Supreme Allied Commander, Europe, and counterparts from Britain, France, Germany, and the Netherlands—contended that a first strike nuclear option remained an "indispensable instrument" since there was "simply no realistic prospect of a nuclear-free world."[4] In a possibly oxymoronic or fatalistic construction with regard to future NATO options, the authors noted that the "first use of nuclear weapons must remain in the quiver of escalation as the ultimate instrument to prevent the use of weapons of mass destruction."[5]

As in the case of Baluyevsky's statement about Russian doctrine, the NATO generals' manifesto about nuclear first use can be interpreted in either of two ways: as a restatement, perhaps with brio, of existing doctrine; or, to the contrary, as a slight movement of the pendulum of usable military options further away from the "nuclear taboo" and toward an explicit preference for nuclear preemption or prevention under certain conditions. The implication that either NATO or Russia might authorize the first use of nuclear weapons against nonstate actors who were planning attacks with weapons of mass destruction (WMD), and/or against states harboring such terrorists, was not unknown in military planning studies. But the public advertisement for such drastic military options has seemed to reach a higher decibel of recognition outside of professional military circles.

American, NATO, and Russian declaratory and operational policies with respect to nuclear first use are of interest not only to their respective internal audiences. Other state actors, including those with nuclear weapons and long-range delivery systems, will take note. For example, China's official policy with respect to the use of nuclear weapons is one of "no first use." On the other hand, new doctrine for the use of missiles in warfare notes that a strategy of "active defense" can include sudden "first strikes" in campaigns or battles as well as "counterattacks in self defense" into enemy territory.[6]

In addition, a vigorous debate has appeared among Chinese military and civilians about the viability of China's no first use policy—partly in the context of U.S. conventional military capabilities for long-range, precision strike against Chinese nuclear forces. According to one American expert on the Chinese military:

> *They* [People's Liberation Army military thinkers] *fear that a conventional attack on China's strategic missile forces could render China vulnerable and leave it without a deterrent. This has led to a debate in China among civilian strategic thinkers and military leaders on the viability of the announced "no-first-use" policy on nuclear weapons. Some strategists advocate departing from the "no-first-use" policy and responding to conventional attacks on strategic forces with nuclear missiles.*[7]

A further concern for U.S. military observers is the apparent mixing of nuclear, nuclear-capable, and conventionally armed missiles within the same operational and tactical units. As Larry Wortzel has noted, the decision "to put nuclear and conventional warheads on the same classes of ballistic missiles and collocate them near each other in firing units of the Second Artillery Corps also increases the risk of accidental nuclear conflict."[8] Related to this concern about accidental or inadvertent nuclear war or escalation are the doctrinal emphases in People's Liberation Army and Second Artillery thinking on the massing of decisive missile fires with surprise in a theater war; ambiguity about the kinds of warheads used in ballistic missile attacks on naval battle groups; and increasing Chinese interest in the military uses of space and in capabilities for attacking U.S. systems supporting warning, command and control, and missile defense.[9]

Russia's military doctrine includes the option of nuclear first use or first strike in a conventional war involving attacks on Russian state territory or otherwise threatening to Russia's vital interests

Caveats and Complexities

Russian and NATO interest in the possibility of preemption, and in making more explicit the existence of preemption against terrorists or other nonstate actors, is quite understandable. In the aftermath of 9/11 and other high profile terrorist attacks in the United States and Europe, the "war on terror" has carried NATO military operations into Afghanistan and realigned U.S. military thinking and planning along the lines of asymmetrical warfare. Russia, also victimized by costly terrorist attacks since 9/11 and fighting against terrorists and insurgents in Chechnya, is as concerned as the United States and NATO countries in regard to possible terrorist WMD use. Both NATO and Russian leaders recognize that nuclear weapons in the hands of terrorists create an unacceptable risk of a catastrophic attack.[10]

Acknowledgement of the peril created by terrorists with nuclear weapons or other WMD does not necessarily lead to the conclusion that *nuclear* preemption against such targets is a valid choice. There are several points to be considered. First, the United States now holds the high card with respect to long-range, conventional precision strike capabilities, supported by mastery of the information and electronics spectra. Given accurate intelligence and targeting information, the United States and therefore NATO can strike across continents or oceans and against virtually any target with near impunity and unprecedented accuracy.

Second, nuclear weapons cause collateral damage that may be unacceptable to the user. The first use of nuclear weapons in anger since Nagasaki would bring international inquiries, and possibly recrimination, for the perpetrator. Even tactical or "mini" nuclear weapons would cause civilian casualties in unknown numbers. And if, in the aftermath of a nuclear preemption for the sake of counterterrorism, the target were misidentified or the intelligence were flawed, the damage to the credibility of the attacker, in political and in moral terms, would be inestimable. For example, a preemptive *nuclear* attack on the pharmaceutical plant in Sudan in 1998, whose operators were allegedly in cahoots with al Qaeda and engaged in making or storing biological weapons, would have been worse than an embarrassment given the ultimately ambiguous and widely disputed intelligence in support of that strike.

Some contend that more precisely delivered nuclear weapons with reduced yields are ideal for "bunker busting" against terrorist or rogue state actor storage facilities for WMD. Nuclear weapons would offer the advantage of burning up the residue of any chemical or biological weapons stored at the suspect site. However, the collateral damage to surrounding communities and facilities might still be extensive, and the distribution of radioactivity across the region would be subject to a number of uncertainties, including weather and seasonal variations in climate. The collateral damage from reduced yield nuclear weapons might well exceed the expectations of optimists and, in the process, also bring into question American or NATO motives and ethics.

The objection might be raised here that Russia, lacking the conventional military capabilities of the United States and NATO, has a stronger case for nuclear preemption against anticipated WMD attacks by terrorists. However, in carrying out a nuclear preemption, Russia faces some of the same decisionmaking tradeoffs as NATO does, and possibly others.

If Russia were to fire the first nuclear weapon since 1945 against terrorists, its neighbors and trading partners would hold their breath. They would worry whether this was a sign of Russian willingness to repeat the exercise under conditions of similar, or lesser, provocation. The United States and NATO would be discussing whether to increase their own preparedness for nuclear war and the adequacy of their current forces for nuclear deterrence. Russia's economic relations with Western Europe could be destabilized, and the Kremlin's program for building an entirely more prosperous economy based on energy sales might be disrupted. In addition, Russia's inclusion among the Group of Eight as an interlocutor rests not only on its raw economic or military power, but also on its perceived legitimacy and commitment to world order.

Finally, in any nuclear first use, there are the important particulars of *against whom* and *where*. If Russia were to employ tactical or smaller nuclear weapons against terrorists on its own state territory, and if evidence proved that a terrorist WMD attack was indeed imminent, then the world would take notice, but the matter would be widely regarded as a justified self-defense of Russia's homeland. A more complicated situation would occur if Russia struck preemptively with nuclear weapons against alleged terrorists in its "near abroad," especially in states that are in contention with Russia over various issues or being considered for membership in NATO. A preemptive nuclear attack outside of Russia's own territory against terrorists, however threatening they are perceived to be, raises issues of violation of state sovereignty and sets the dangerous precedent that others can cross state boundaries in nuclear preemption of suspected terrorists.

Neither NATO nor Russia faces easy issues, therefore, in deciding whether and when to use nuclear preemption—whether first use or first strike. Indeed, the distinction between first use and first strike is itself a problematic aspect of the case for nuclear preemption. This conceptual problem exists alongside another: the relationship between preemption and preventive war.

Preemption and Prevention

The distinction between preemptive and preventive attacks lies in the attribution of motive (by the defender against the attacker), in the reliability of the intelligence (relative to the plans of the attacker), and in the time available for making decisions (whether an attack is in progress or being considered in good time). If a defender has actionable intelligence that an attack has already been set in motion or is imminent, then preemption is a means of avoiding the worst effects of being surprised. Of course, people can quibble about what "actionable intelligence" means, but for the present discussion it means that there is verifiable information from human or technical (or both) sources that an attack is in progress or is about to be launched. For example, the U.S. nuclear attack warning system during the Cold War required confirmation by "dual phenomenology" (satellites and ground stations) before authoritative interpretation of an attack in progress was validated.

In addition to the reliability of the defender's intelligence about the attacker's capabilities and plans, the matter of time is also important in the justification for preemption. Preemptive attacks occur under the assumption that the option of forestalling the attack by diplomacy or deterrence no longer exists. The attacker has taken an irrevocable political decision for war. The defender's options are either to await the first blow or, alternatively, to act first to minimize damage or to preemptively destroy the enemy's strike capabilities if possible. The time pressure for making these judgments creates a compression factor that can destabilize rational or even sensible decisionmaking. Even when nuclear weapons are not involved, crisis management often brings out the worst in decisionmaking pathologies by individuals and organizations.

For instance, the months of July and August 1914 present a rich tableau of leaders who made mistaken assumptions about other states' intentions, capabilities, arts of war, and politico-military staying power. Some heads of state and foreign ministers were unfamiliar with their own country's war plans and their implications for crisis management. In lieu of intelligence, stereotypical thinking about national character and military dispositions was available to take up the slack ("the Frenchman cannot be a very effective fighter; his voice is too high"). Added to this was the uncertainty about alliance cohesion on the part of the Triple Alliance and the Triple Entente: each state or empire had its own priorities, in policy and in strategy, and these priorities could

the United States holds the high card with respect to long-range, conventional precision strike capabilities, supported by mastery of the information and electronics spectra

Indian Prithvi short-range ballistic missile launches from seaborne platform

India Today

not be synchronized under the time pressure between Sarajevo and the guns of August.

In a crisis involving two nuclear armed states with the capability for second strike retaliation, time pressure becomes nerve shattering. The evidence from studies of the Cuban missile crisis of 1962 shows that American and Soviet leaders operated under high stress and strained group decisionmaking throughout the 13 days that were required for the crisis to run its course. U.S. officials at one point wondered whether Soviet Premier Nikita Khrushchev had actually been the victim of a coup and replaced by a hard-line Politburo coalition more determined for war. And the "known unknowns," as Donald Rumsfeld might have said, are, in retrospect, equally discouraging for optimists about nuclear crisis management.

One of these "known unknowns" was whether the Soviets had deployed any nuclear capable delivery systems in Cuba in addition to the medium- and intermediate-range ballistic missile launchers that provoked the crisis. U.S. officials at the time assumed not, but later historians determined otherwise. Nuclear capable surface-to-surface short-range missiles were deployed with Soviet ground forces in Cuba, unknown to U.S. intelligence at the time. And Soviet ground force commanders, in the event of a U.S. military invasion, were presumably authorized to use nuclear capable missiles in self-defense. The result of this "known unknown" could have been World War III, as a U.S. nuclear retaliation against Soviet nuclear first use in, or near, Cuba led to further escalation.

if a defender has actionable intelligence that an attack has been set in motion or is imminent, preemption is a means of avoiding the worst effects of being surprised

Preventive war or attack differs from preemption, nuclear or otherwise. Preventive war is anticipatory of a possible, but not an inevitable, future attack. Israel's attack on Iraq's nuclear reactor at Osirak in 1981 was motivated by Tel Aviv's concerns about what Saddam Hussein might do, should he acquire nuclear weapons at a future time. On the other hand, George W. Bush's attack on Iraq in 2003 was, if we take the President at his word, preemptive. Iraq was thought to have chemical and biological weapons by U.S. and other intelligence services, and its continuing interest in developing nuclear weapons was assumed on the basis of Saddam's prior stiffing of United Nations international inspectors.

Russian General Yuri Baluyevsky indicated Russia would use preemptive nuclear strike in certain cases

U.S. Air Force (D. Myles Cullen)

Case studies of military decisionmaking lend themselves to conflicting interpretations. Two kinds of interpretations overlap: those of the policymakers and advisors who participated in the decision, and those of academic or other observers of those decisions. Observers have the advantage of hindsight and distance from the actual events; insiders appreciate the feel for the pressures experienced by those who had to act with incomplete information. The Bush administration decision to invade Iraq in 2003, for instance, appears unwise in retrospect on account of the failure to find any weapons of mass destruction. In addition, the botched occupation following the end of the active combat phase on May 1, 2003, casts additional retrospective doubt on the validity of the entire U.S. strategy and policy.

On the other hand, Bush policymakers were leaning forward into the decision, not backward against the harsh verdict of history. They did interpret some intelligence with a preconceived bias, for which they paid a significant cost in public credibility. However, all administrations do this; separating the "facts" of intelligence collection and analysis from the "interpretations" placed upon it by policymakers and military advisors is virtually impossible. An interesting aspect of the Bush administration view of Iraq was that it was conditioned by the retrospective appraisal of the events of 9/11. Iraq was one front on the war on terror, and Saddam might slip chemical or biological (or nuclear, once he had them) weapons to terrorists. Thus, by wrapping Iraq around the war on terror like a double helix, President Bush, Vice President Dick Cheney, and their advisors misperceived a pattern of strategic cooperation between Iraq and al Qaeda.

In reaction to the preceding critique, the Bush administration might respond that its war against Iraq was not preemptive, but preventive. It was to prevent Saddam from acquiring nuclear weapons in the future that he might use against Israel or give to terrorists. This justification might have merit if the Bush administration had not insisted that the danger posed by Iraq's WMD was *imminent*: that justification requires a case for preemptive, not preventive, war. The same problem applies to the Bush National Security Strategy that defends preemption as a necessary tool for policymakers and commanders under some circumstances. Few experienced policy planners or military analysts would argue the point, but the Bush usage of "preemption" often elides into "preventive" war and vice versa.

First Use and First Strike

The Cuban missile crisis provides an interesting overture for the second part of the problem of terminology related to nuclear first use: the distinction between nuclear *first use* and *first strike*. Canonical Cold War usage referred to a nuclear first strike as an attack involving missiles or bombers of intercontinental range. Theater or shorter range attacks were usually described as first use. However, this distinction was somewhat muddied by the overlap between geography, Alliance membership, and technology. An example is provided by the Soviet and then NATO deployment of Intermediate Nuclear Forces (INF) during the 1970s and 1980s before they were disarmed by treaty in 1987.

NATO ground-launched ballistic missiles and ground- and sea-launched cruise missiles deployed in Europe were capable of striking targets not only within Eastern Europe but also within Russia itself. Therefore, whereas NATO viewed its "572" deployments (464 ground-launched cruise missiles and 108 Pershing II missiles deployed in NATO countries beginning in December 1983) as offsetting capabilities in response to the Soviets' SS–20 ground-launched ballistic missiles, Soviet military planners saw the NATO deployments as an escalation going beyond a symmetrical response to the Soviet initiative. One reason for this Soviet perception of NATO's intentions was the capability of U.S. Pershing II ballistic missiles to reach sensitive military and command targets in the western Soviet Union within minutes. Pessimistic Soviet military analysts might have interpreted the Pershing II as a first strike weapon, intended to neutralize or obviate a Soviet retaliation following a NATO nuclear first use.

Further complicating the situation with respect to INF deployments was the two-way connection between INF and the ladder of escalation. Looking downward, intermediate nuclear forces were connected to the conventional forces deployed in Europe by both NATO and the Warsaw Pact. Looking upward, they were connected to the strategic nuclear deterrents of both the Americans and Soviets (and, with more uncertainty, to the British and French national nuclear forces, the latter conditionally available to NATO but solely under French determination). Thus, the "intermediate" character of INF rested only on the technical dimensions of their range and probable destructive power. But the political "range" of INF capabilities was more problematic.

For the Soviets, INF threatened to create a seamless preemptive theater warfighting capability in Europe that would, if put into effect, impose a military defeat or stalemate on NATO while simultaneously deterring U.S. escalation of the conflict into a global nuclear war. INF for the Americans, from the Soviet perspective, threatened to undo this Soviet plan for "decoupling" NATO theater from American "strategic" nuclear forces by raising the stakes and risks of any "theater" nuclear first use. However, the U.S. and NATO 572 deployments could also raise risks for NATO. Soviet war planners might decide that they had to attack the NATO INF immediately upon the outbreak of any large scale war, conventional or nuclear. So instead of contributing to a separation of conventional from nuclear war in Europe, or creating a firebreak between theater and strategic nuclear war, INF could expedite the leap from nuclear first use into total war.

In short, both the Soviets and NATO soon realized that INF deployments created a zone of uncertainty with respect to deterrence and the control of escalation that was unacceptable. The walk from first use to first strike was too quick and too ambiguous for diplomats and war planners to sort out in the fog of war. It was problematic enough to maintain any clear firebreak between tactical and strategic weapons once the nuclear threshold had been crossed—a distinction that the Soviets as a matter of practice disavowed, although they were well prepared for tactical nuclear first use apart from ordering a nuclear first strike by their long-range forces.

The case of INF in Europe shows how the line between first strike and first use is as much a matter of arbitrary definition as it is a reliable guide to military effectiveness or deterrence credibility. If nuclear weapons of shorter range and lesser yields were capable of being used with the surgical precision of conventional weapons, then shorter range and lower yield nuclear weapons would be stronger candidates for preemption and first use or first strike missions. However, the advent of sanitized nuclear weapons, comparable in their collateral damage to conventional means, is not imminent and, ironically, is not judged to be desirable by politicians or military planners. Nuclear weapons derive their deterrent effects from their "awfulness": their capability to destroy not only military targets, but also societies and economies on a large scale in a historically unprecedented short period of time. Even the most obtuse politician is thus pushed backward from candidate scenarios of "victory" on offer from briefers on first use or first strike.

The ambiguous space between first use and first strike becomes even more evident if nuclear weapons are used not to "strategic" effect but rather across borders within a region, and covering ranges that NATO and Russia would consider as tactical or operational-tactical. Indian strikes on Pakistani or Chinese territory, or strikes by Pakistan or China against India, could be accomplished with short- or medium-range missiles or aircraft with similar reaches. If these delivery systems were nuclear armed, their effects on the targeted state might create strategic dysfunctions requiring a proportionate response or worse.

by wrapping Iraq around the war on terror like a double helix, the Bush administration misperceived a pattern of strategic cooperation between Iraq and al Qaeda

Thus, one of the major dangers of nuclear proliferation is the possibility of lowering the threshold of decisive attacks against a state's armed forces, political leadership, command and control system, or economy without requiring weapons of intercontinental or even intermediate range. In addition, contiguous nuclear wars, as opposed to nuclear exchanges between distant powers such as the United States and Russia or the United States and China, allow comparatively shorter times for the defender for launch detection, processing of information, and decisionmaking prior to the impact of a first strike. Realizing this, contiguous states fearing the opponent's prompt launch or preemption might be driven toward hair triggers that biased their options toward preemption in first use or first strike.

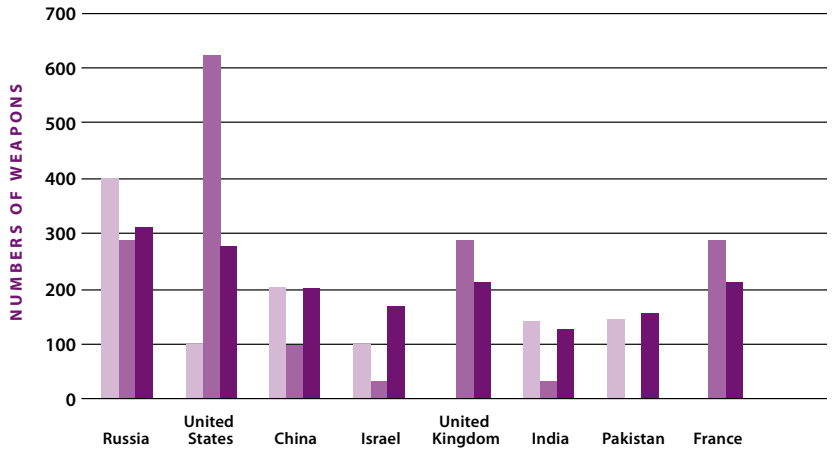
Methodology

The following develops a methodology for analyzing some aspects of the first use/first strike and preemption/prevention problems as they might appear in various future nuclear "worlds," which are set up as analytical reference points. Neither world is predicted to realize itself in actuality—at least not in detail. They are hypothetical constructs projected roughly to the time period 2015–2020. The first

world is the optimist's outcome. In this international system, the number of nuclear weapons states is limited to the presently declared and widely acknowledged eight: Britain, China, France, India, Israel, Pakistan, Russia, and the United States. The case of North Korean nuclear proliferation is reversed according to the protocols of the Six-Party agreement reached in 2007 among North Korea, South Korea, the United States, Russia, China, and Japan. Iran is persuaded by diplomacy and/or economic sanctions to stop short of a nuclear weapons capability, although its nuclear infrastructure for peaceful purposes places Iran within about 6 months of weaponization—after a political decision to do so.

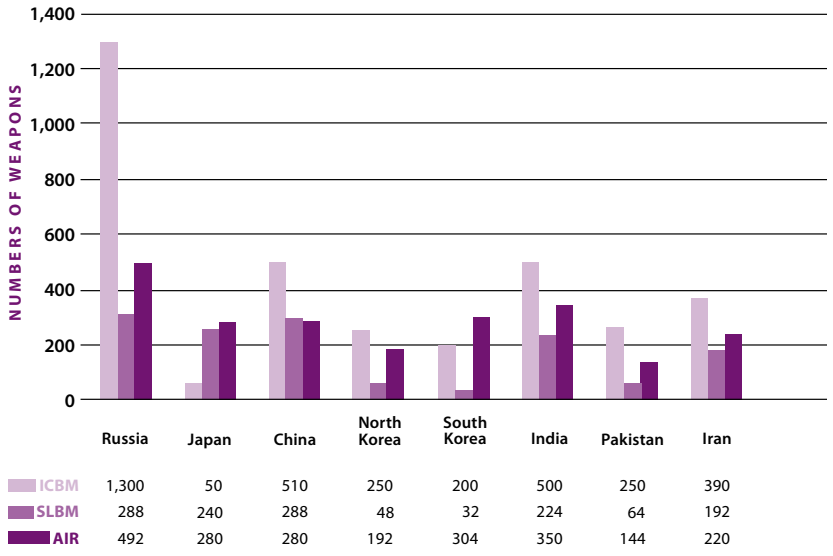
The second world is the pessimist's predicament: nuclear weapons spread in Asia and in the Middle East with strategic reach into Asia. In this scenario, nuclear weapons states in Asia include China, India, Iran, Japan, North Korea, Pakistan, Russia, and South Korea. The reason for labeling this world as pessimistic is not to *assume* that nuclear war or nuclear terrorism is more likely in the second world than the first. Some highly regarded academic opinion argues that the spreading of nuclear weapons does not necessarily lead to greater danger of nuclear war in world politics. The second world is more pessimistic on the basis of its indeterminacy: a larger variety of regimes, with a greater mix of force structures and command systems, will be operating nuclear weapons for the purpose of deterrence (at least).

Figure 1. Total Strategic Weapons: Holding Model



Key: ICBM: Intercontinental ballistic missile, SLBM: Submarine-launched ballistic missile, AIR: Aircraft

Figure 2. Total Strategic Weapons: Folding Model



Key: ICBM: Intercontinental ballistic missile, SLBM: Submarine-launched ballistic missile, AIR: Aircraft

Analysis

For purposes of simplification and analysis, each of the two nuclear worlds is set up as follows. The first, or optimist, world is a three-tier system based on agreement: the United States and Russia have a maximum of 1,000 operationally deployed nuclear weapons on intercontinental launchers; Britain, China, and France, a maximum of 500; and India, Pakistan, and Israel, a limit of 300. In the second, or pessimist, world, the Asian nuclear balance of power has established no consensual ladder of capability. Notional nuclear forces are assigned based on possible future capabilities, perceived threats, and decisionmaking proclivities. Continuation of the regimes in North Korea and Iran, more or less, is presumed. Pakistan is anybody's guess, but its geostrategic setting dictates certain continuities in policy and planning.

The initial force structures of each world prior to any use of nuclear weapons are depicted in figures 1 and 2, which summarize the total strategic weapons for, respectively, the optimist world (or *holding* model) and the pessimist international system (or *folding* model).

Figures 3 and 4 summarize the results of nuclear force exchanges for the states in each of the preceding two systems. Figure 3 shows the outcomes of first strikes against the deployed nuclear weapons of each state in the optimist world/holding model by summarizing their numbers of second strike surviving and retaliating weapons that would arrive on enemy targets. Figure 4 provides equivalent information for each state in the pessimist world/folding model.

In view of the more disparate force structures in the pessimists' predicament world, compared to the optimists' outcome world, the task of comparing performances and indicators from one world to another is challenging. Two measures of assessment are proposed to help us: generation stability and launch on warning stability. *Generation stability* is the difference between the number of second strike surviving and retaliating warheads for each state on generated alert, compared to day-to-day alert. *Launch on warning stability*, in turn, is

the difference between the number of second strike surviving and retaliating warheads when *launched on warning*, compared to *riding out the attack* and retaliating.

Figure 5 summarizes the data on generation stability for the optimist world/holding model. Each country's numbers of surviving and retaliating weapons are represented by two vertical bars. The left bar for each state shows the number of arriving retaliatory weapons on *day-to-day alert* as a percentage of the number of arriving weapons on generated alert—for the condition of launch on warning. The right bar shows the number of arriving retaliatory weapons on day-to-day alert as a percentage of the number of arriving weapons on generated alert—for the condition of riding out the attack. The difference between the size of each state's left and right bars is one measure of the stability or instability of its deterrent force.

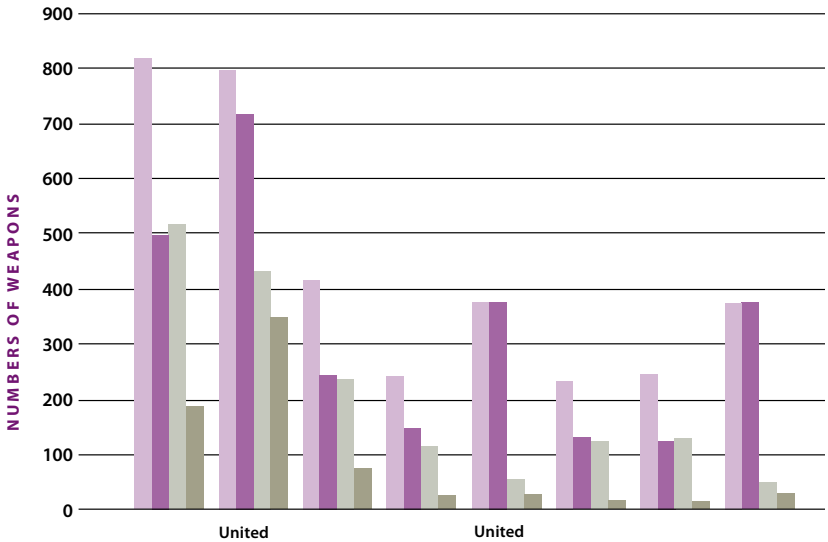
In figure 6, the data on generation stability are summarized for each country in the pessimist world/folding model. The left and right bars for each state show, respectively, the number of arriving retaliatory weapons on day-to-day alert as a percentage of the number of arriving weapons on generated alert—under conditions of launch on warning; and the number of arriving retaliatory weapons on day-to-day alert as a percentage of the number of arriving retaliatory weapons on generated alert—when a state chooses to ride out the attack.

nuclear weapons derive their deterrent effects from their capability to destroy not only military targets, but also societies and economies on a large scale

In figure 7, the nuclear force exchange data are summarized for launch on warning stability in the optimist world/holding model. The left bar shows the number of arriving retaliatory weapons for each state when riding out the attack as a percentage of its number of arriving retaliatory weapons when launched on warning—under conditions of generated alert. The right bar shows the number of arriving retaliatory weapons for each state when riding out the attack as a percentage of its number of arriving retaliatory weapons when launched on warning—under conditions of day-to-day alert. The larger the difference between the left and right bar for a given state, the higher the apparent degree of instability on this measure.

In figure 8, the findings on launch on warning stability are summarized for the pessimist world/folding model. The left bar shows the number of arriving retaliatory weapons when riding out the attack as a percentage of the number of arriving weapons under a condition of launch on warning—when forces are on generated alert. The right bar shows the number of arriving weapons when riding out

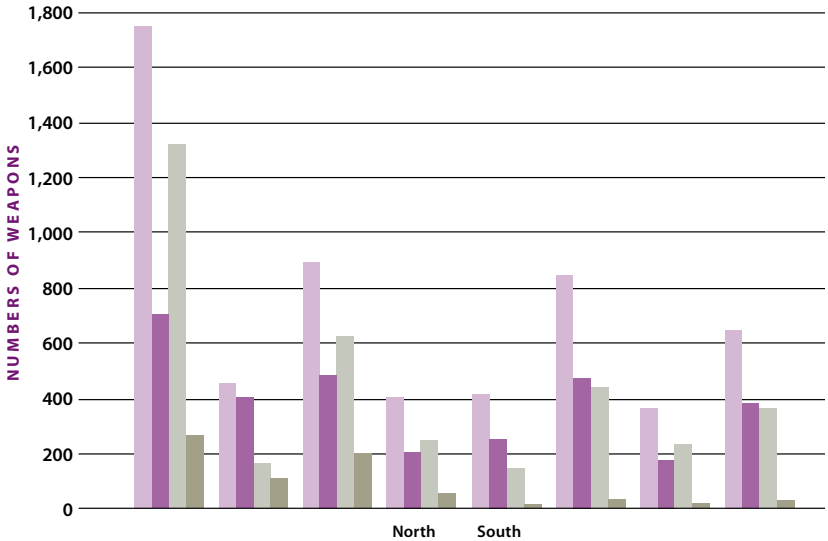
Figure 3. Arriving Retaliatory Weapons: Holding Model



	Russia	United States	China	Israel	United Kingdom	India	Pakistan	France
GEN, LOW	821	797	407	238	388	233	243	388
GEN, ROA	497	716	242	157	388	129	127	388
DAY, LOW	516	429	236	107	47	120	130	47
DAY, ROA	192	348	70	26	23	14	13	23

Key: GEN: Generation stability, LOW: Launched on warning, ROA: Riding out the attack, DAY: Day-to-day alert

Figure 4. Arriving Retaliatory Weapons: Folding Model



	Russia	Japan	China	North Korea	South Korea	India	Pakistan	Iran
GEN, LOW	1,762	444	896	404	410	842	382	667
GEN, ROA	709	403	483	201	264	477	179	392
DAY, LOW	1,326	175	615	251	167	441	235	382
DAY, ROA	273	135	202	49	19	59	28	51

Key: GEN: Generation stability, LOW: Launched on warning, ROA: Riding out the attack, DAY: Day-to-day alert

the attack as a percentage of the number of arriving weapons under launch on warning—when forces are on day-to-day alert.

Insights

These figures require interpretation with trepidation. The analysis deliberately posits hypothetical worlds with generic force structures instead of attempting to make "micro" predictions as to who will actually deploy what. It is an analytical exercise, not a crystal ball. However, some conclusions suggest themselves for reasons of theory and policy when the data analysis is applied to what we already know, or think we know, about this subject.

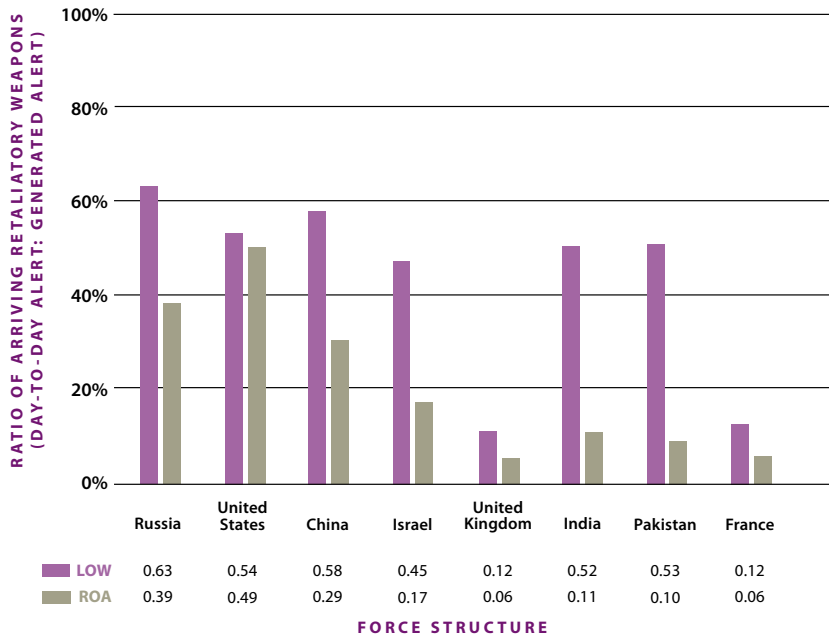
First, force structures matter. It is true that U.S.-Soviet arms control negotiations coughed up a great deal of phlegm in order to reach accords that were based, ultimately, on a conditional commitment to autolimitation. However labored the birthing process for various cycles of the Strategic Arms Limitations Talks and Strategic Arms Reduction Treaty, the Americans and Soviets were forced to confront the implications of deploying land-based compared to seabased ballistic missiles, or missiles compared to aircraft. These realities are apparent in the figures. For example, forces most dependent on land-based ballistic missiles, compared to submarine-launched ballistic missiles or bombers, are relatively vulnerable to first strike and encourage higher levels of instability. Although this finding is not new, its implications in a world of greater Asian and Middle Eastern nuclear proliferation are not obvious.

forces most dependent on land-based missiles are relatively vulnerable to first strike and encourage higher levels of instability

Critics might retort that contiguous states with land-based missiles on mobile launchers (transporter-erector-launchers, or other kinds of movable platforms) would have a higher rate of prelaunch survivability, compared to missiles based in silos or otherwise not really mobile. This might be true, but there are differences between missiles that are *truly* mobile and those that are *merely* movable. The latter are not always purpose-built for prompt relocation during a crisis or after an enemy attack has presumably begun. Some of the American and Soviet Cold War plans for movable or mobile intercontinental ballistic missiles (ICBMs) provided fodder for scientific skepticism and even political incredulity.

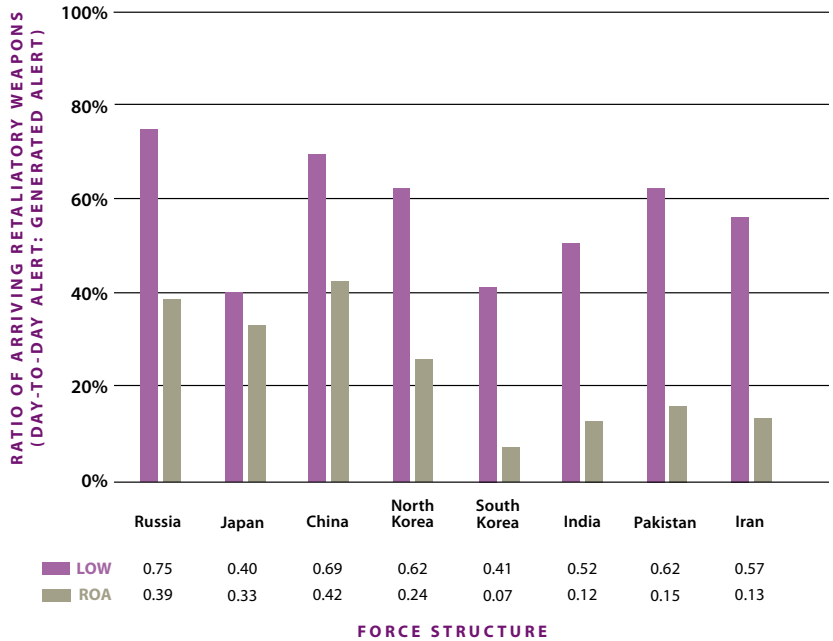
For example, the Reagan "Dense Pack" plan for clustering ICBMs together for greater survivability and the Carter administration "racetrack" scheme for mobile ICBM basing in the American Southwest were both eventually judged to be infeasible from a technical, military, and/or political standpoint. An American plan for "deep underground basing" of land-based missiles for retaliation after riding out the attack had *Dr. Strangelove* overtones as did the Soviets' alleged "dead hand" postattack nuclear command and control system, providing for some dedicated ICBMs that would then trigger follow-on launches by other retaliatory forces in the event that Soviet nuclear

Figure 5. Generation Stability: Holding Model



Key: LOW: Launched on warning, ROA: Riding out the attack

Figure 6. Generation Stability: Folding Model



Key: LOW: Launched on warning, ROA: Riding out the attack

command, control, and communications were decapitated by enemy attacks.

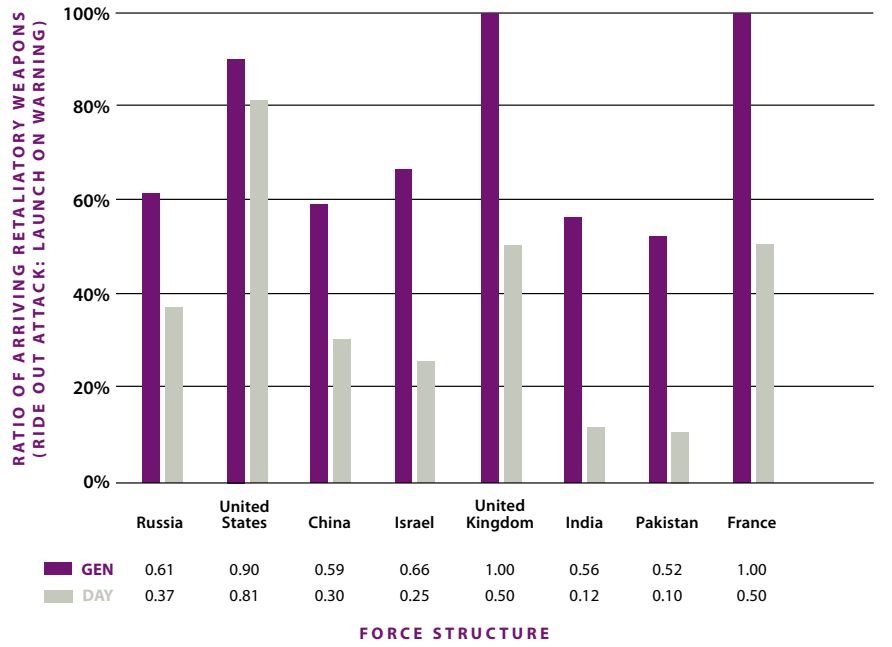
Short- and medium-range land-based missiles might be easier to move and hide than their larger counterparts with multitheater or intercontinental ranges. On the other hand, the race between military "hiders" from reconnaissance and "seekers" appears to be moving in favor of the latter. Global space-based, airborne, and other sensors for collecting enemy order of battle and communications information are steadily improving, relative to the stealth and seclusion of the targets that they are attacking—at least on land. This may suggest to states that they move more of their missile forces out to sea, on surface ships, or submarines. Not only does seabasing, compared to land-basing, add to uncertainty about the locations of missiles, but it also provides survivability in two ways: by waterborne movement, and by uncertainty as to which ships are armed with nuclear, as opposed to conventional, munitions (or both).

In addition, smaller nuclear powers might be tempted to base more of their nuclear charges on aircraft compared to missiles. Aircraft are "slow flyers" compared to "fast flyers" (land- and seabased ballistic missiles) and thus reduce the risk of accidental or inadvertent war because they can be recalled if launched by mistake. In addition, aircraft are poor tools for preemption given the pervasiveness of modern air defense systems. Unhappily for pilots, the same characteristic of airpower makes it more vulnerable in retaliation. An enemy who has already struck first with missiles or bombers would have its air defenses at maximum readiness for counterstrikes. On balance, aircraft and air delivered weapons are a stability-plus launch platform, although their efficiency in destroying targets relative to ballistic missiles is smaller (missile defense technology lags air defense technology relative to the platforms opposing it).

Medium-size nuclear powers, in either the optimist or the pessimist world, might try to deploy more of their nuclear capable launchers at sea. This seaborne deployment might be easier to accomplish for cruise missiles, compared to ballistic missiles. The operation of long-range, nuclear armed ballistic missile submarines requires considerable funding, expert crews, and highly expensive and nuanced command and control. Even now, post-Soviet Russia is challenged to maintain even a fraction of the fleet ballistic missile submarines deployed by the Soviet Union during the 1980s. The sinking of the Russian submarine *Kursk* in 2000 due to an accidental torpedo explosion (although the *Kursk* was a cruise missile and not a ballistic missile submarine) shows how dangerous advanced subsurface operations can be—even without an opponent—when technology or personnel are insufficiently "fault tolerant."

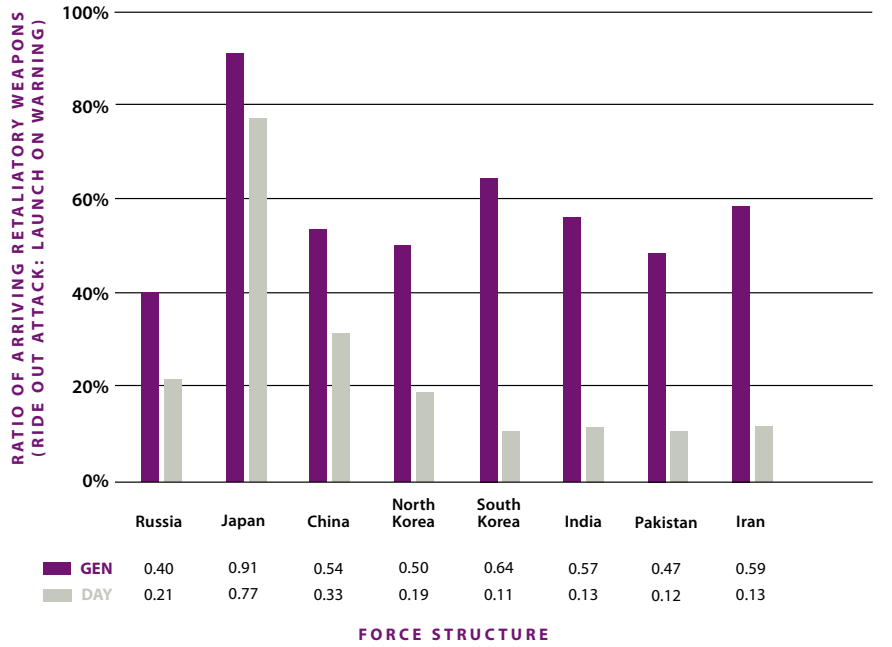
A second general finding or implication of the analysis is that the degrees of instability accepted by the states in this model are barely acceptable in the optimist world—and verging on intolerable in the pessimist system. As the figures indicate, some states even in the "bull market" system for stability have large gaps between their arriving retaliatory weapons on generated, compared to day, alert and between

Figure 7. Launch on Warning Stability: Holding Model



Key: GEN: Generation stability, DAY: Day-to-day alert

Figure 8. Launch on Warning Stability: Folding Model



Key: GEN: Generation stability, DAY: Day-to-day alert

retaliating weapons on prompt, compared to delayed, launch. Hair triggers are a nuisance in the optimist world/holding model; they are the gateways to hell in the pessimist world on account of the fact that in the folding model, more states with historical or present political grievances share geographical proximity. Forces that depend on prompt launch or high generation in time of crisis can provoke the very war that they are intended to deter, especially if states' decisionmakers are aware of their limitations on day alert or when riding out an attack and then retaliating.

A third implication of the results in the preceding analysis has to do with the issue of "no first use" as a declaratory or operational policy for American or other nuclear forces. No first use of nuclear weapons is an ethically admirable, and politically desirable, declaratory policy. However, it is highly conditional on circumstances, and its effectiveness is scenario dependent. NATO found it inexpedient during the Cold War on account of the presumed inferiority of its conventional forces compared to those of the Soviet Union and Warsaw Pact deployed in Europe. Russia now finds a no first use declaratory policy unpropitious for the same reason: the decrepit character of its conventional forces compared to those of the United States and NATO, or to Soviet forces of the late Cold War.[11]

It is argued that no first use doctrines are sometimes dysfunctional for deterrence, especially for the deterrent umbrella that the United States might want to extend to allies. As a case in point, the United States might want some states in the Middle East or Asia to be deterred from attacking regional American allies (Taiwan, Japan, Israel, and Iraq) with conventional forces or with weapons of mass destruction other than nuclear. The credible threat of nuclear first use against such adventurism might give pause to aggressors who would otherwise be willing to gamble on U.S. restraint. For example, U.S. negotiators apparently informed Saddam in 1991, prior to the outbreak of Operation *Desert Storm*, that any Iraqi use of chemical or biological weapons would put all American options on the table, including the possible first use of nuclear weapons. On the other hand, this case might be interpreted not as one of deterrence but as an instance of escalation control for the management of a conflict that U.S. officials and Iraqis knew was inevitable.

Extended deterrence does have the value of providing a U.S. nuclear umbrella over states in Europe or Asia that might have deployed their own nuclear weapons in lieu of American protection. On the other hand, demonstrating that extended deterrence has worked because of American nuclear weapons, as opposed to other assets, is a more difficult argument now than it would have been during the Cold War. In conventional warfare, the United States, in the first decade of the 21st century, was unarguably superior to any other state as a military power with global reach.[12] The case that nuclear umbrellas, as opposed to conventional raincoats, are necessary for the protection of allies against threats *other than nuclear coercion or attack* is weaker now than hitherto.

As an alternative to a declaratory policy of nuclear first use, the nuclear powers might consider the doctrine of "defensive last resort," which is one step less rigid than nuclear first use. A doctrine of last resort (presumably defensive in intent) was adopted by NATO in 1991, and as a declaratory policy, it is more suited to the realities of operational policy and military practice. Under a doctrine of defensive last resort, the first use of nuclear weapons is not precluded, but it is also not encouraged as an early step on the ladder of escalation. As explained by the authors of an important study on nuclear arms control:

> *To recognize the possibility that in some future defense against aggression the use of the nuclear weapon could unexpectedly become the only alternative to an even worse disaster is not to encourage reliance by planners on any such action, nor does it support any doctrine of early use. A doctrine of defensive last resort is fully consistent with a continuing American effort to sustain the worldwide tradition of nonuse.*[13]

The preceding point is reinforced by the blurred line between nuclear first use and first strike already noted in this discussion, and by the unhealthy dependency of current and possible future nuclear states on prompt launch and high alert (that is, hair triggers) in order to guarantee the survivability and retaliatory credibility of their nuclear forces.

American, NATO, or even Russian declaratory policies, let alone extensive debates, about nuclear first use or first strike are unhelpful as matters of public diplomacy. As matters of military credibility or deterrence stability, they are even worse. There is little to be gained, and much potentially to be lost, by front-ending nuclear weapons onto undisciplined "what if" policy discussions. In an exceptional case that requires serious consideration of nuclear first use, or the threat of same, leaders can rise to the occasion without having already mortgaged their reputation for seriousness and sanity.

The threat of nuclear first use against terrorists with WMD or states that harbor them is hardly likely to dissuade terrorists, although it may inhibit other states from providing comparable support to dangerous malcontents. However, terrorists might actually welcome a preventive nuclear attack on their headquarters and storage sites, providing them with martyrdom and inflaming much of the rest of the world against American ideals and policies. Nuclear weapons are neither the obvious first choice for suppression of nonstate actors by preemptive military attacks nor the expedient solution to a problem that is best resolved by improved intelligence, better international cooperation in counterterror operations, and lethal nonnuclear munitions. **JFQ**

NOTES

[1] Andrei Kislyakov, "Russian Army Prepares for Nuclear Onslaught," *RIA Novosti*, January 29, 2008.

[2] Vladimir Ivanov, "Comparison of Russian, U.S., and NATO Policies toward Preemptive Nuclear Strikes," *Nezavisimoye Voyennoye Obozreniye*, February 4, 2008.

[3] Ian Traynor, "Pre-emptive nuclear strike a key option, NATO told," *Guardian Unlimited*, January 22, 2008, available at <www.guardian.co.uk/nato/story/0,,2244782,00.html>.

[4] Ibid.

[5] Ibid.

[6] Larry M. Wortzel, *China's Nuclear Forces: Operations, Training, Doctrine, Command, Control, and Campaign Planning* (Carlisle Barracks, PA: U.S. Army War College, May 2007), 9.

[7] Ibid., viii–ix.

[8] Ibid., 31.

[9] Ibid., 31–33 and *passim*.

[10] Graham Allison, *Nuclear Terrorism: The Ultimate Preventable Catastrophe* (New York: Henry Holt–Times Books, 2004).

[11] Dale R. Herspring, "Putin and Military Reform," in *Putin's Russia: Past Imperfect, Future Uncertain*, 3d ed., ed. Dale R. Herspring (Lanham, MD: Rowman and Littlefield, 2007), 173–194.

[12] Stephen M. Walt, *Taming American Power: The Global Response to U.S. Primacy* (New York: Norton, 2005), 33–36.

[13] McGeorge Bundy, William J. Crowe, Jr., and Sidney D. Drell, *Reducing Nuclear Danger: The Road Away from the Brink* (New York: Council on Foreign Relations, 1993), 85.

Combating WMD *Collaboratively*

By PAUL I. BERNSTEIN

Building international partnerships is a central element of U.S. strategy to combat weapons of mass destruction (WMD). U.S. policy recognizes that the proliferation problem is too large, complex, and urgent for any one nation to tackle alone. Meaningful and sustained progress requires active collaboration among all states that have a stake in managing the problem and the will and capacity to contribute. Current policies build on a foundation of international cooperation that dates back decades, even as they reflect significant changes in emphasis to adapt to contemporary proliferation challenges.

These challenges result in large part from the ongoing impact of globalization. As many have observed, this phenomenon is twofold—technological and political—and both dimensions are making the proliferation problem more complex and difficult to manage. Technologies with legitimate uses that could be applied to unconventional weapons continue to spread globally at a rapid rate, and the growing demand (and competition) for energy, in particular, has the potential to fuel nuclear proliferation pressures in strategically important and sometimes unstable regions. Politically, globalization has contributed to the erosion of traditional state power and boundaries and served to empower both smaller states that are seeking to challenge the status quo and nonstate actors—ranging from individuals to transnational networks—with independent and often extremist agendas. The results are clear enough: proliferation challenges from states whose WMD programs confer on them disproportionate strategic importance; growing interest on the part of terrorists to acquire WMD; and weak states and poorly governed spaces where radical or criminal networks flourish. As these phenomena converge, new proliferation pathways are likely to emerge.[1]

As proliferation dynamics continue to be shaped by globalization, the limits of traditional nonproliferation diplomacy and strategies have become more apparent. The international nonproliferation regime of treaties and institutions is an important political and legal foundation in the fight against WMD, especially in establishing norms of behavior and providing the basis for action to punish noncompliance by states. But this regime, despite its longstanding legitimacy, alone cannot deal effectively with the toughest proliferation challenges we face. It has structural weaknesses not easily overcome and an uneven track record in confronting and reversing noncompliance, and it is not well suited to attack directly the problem posed by nonstate actors such as terrorists and clandestine WMD procurement networks.

A principal thrust of American policy, therefore, has been to complement traditional nonproliferation and disarmament diplomacy with new policy instruments focused more on practical cooperation with security partners to enhance prevention efforts and build defense and response capabilities. In recent years, Washington has spearheaded a number of initiatives focused on different aspects of the proliferation challenge whose purpose is to create a framework for action among like-minded nations. By design, these initiatives do not seek to establish large, standing organizations or bureaucracies, but work instead to adopt actionable principles that enable

Edgewood Chemical Biological Center

National Guardsmen train in chemical and biological incident management

Paul I. Bernstein is a Vice President with Science Applications International Corporation. This article is adapted from *International Partnerships to Combat Weapons of Mass Destruction*, Center for the Study of Weapons of Mass Destruction Occasional Paper 6 (National Defense University Press, 2008).

concrete steps to reduce the WMD threat and increase the capacity of states to act.

This approach rests vitally on the responsible exercise of national sovereignty in combating WMD. This is no less important than sustaining the authorities vested in the institutions that govern the international treaty regime. Security partners are asked to recognize and act on the obligation all states share to address WMD challenges through cooperative activities that are consistent with international and domestic law, and to ensure their national territory is not a source of proliferation threats.

By effectively marshalling coalitions of the willing to act against proliferation threats, international initiatives have begun to alter the dynamics of global cooperation in combating WMD. Progress is being made through a flexible network of partnership activities that gives many nations a stake in the fight against WMD and opportunities to contribute to shared security goals. In particular, these initiatives respond to the unique challenges posed by relatively new proliferation problems such as sophisticated WMD black markets and WMD terrorism—problems that are not limited to individual states of concern but are transnational in nature and therefore require active collaboration to address. These initiatives foster common understanding of the threat, enhanced capacity and interoperability, and habits of cooperation that over time can be leveraged to address a number of security challenges. Collaborative efforts have progressed despite widespread hostility to many aspects of current U.S. foreign policy. Thus, even countries that opposed the war in Iraq have been strong supporters of U.S. initiatives to counter WMD proliferation. To a significant degree, then, U.S. leadership is expected and accepted and will remain indispensable to sustain existing activities and catalyze new efforts.

This article is not intended to be comprehensive. Rather, it highlights a number of important activities that exemplify the effort to establish new mechanisms for partnership, as well as areas where additional work is required.

New Dynamics of Cooperation

Proliferation Security Initiative. A proactive approach to interdiction has become a prominent component of combating WMD strategy, in recognition of trends in the trade and trafficking of WMD- and missile-related materials and technologies that demand a systematic and broad-based response. That response has taken shape principally through the Proliferation Security Initiative (PSI), a growing coalition of nations working to impede the transfer and transport of WMD-related goods consistent with existing international and domestic law but outside the framework of any treaty or multilateral export control regime. Launched in May 2003, PSI exemplifies how political support for combating WMD goals can be converted into operational capacity without creating a formal organization. The PSI began with 11 charter nations, but today more than 80 countries have endorsed its Statement of Interdiction Principles. More than 25 exercises have been conducted, and a number of successful interdictions have taken place, including operations that blocked export to Iran of controlled equipment relating to its missile and nuclear activities.

Just as important, participation in PSI has emerged as an important standard of nonproliferation behavior, and in this sense the initiative represents a form of norm-building—one that results from the political commitment of a significant segment of the international community to define certain activities as unacceptable and to act collectively to thwart and delegitimize those activities. The willingness and capacity of states to enforce national and international laws in order to interdict illicit shipments are now seen as a test of their commitment to an activist global effort to combat WMD. As the de facto norm represented by PSI takes hold, this could serve to exert pressure on important countries that have yet to become full participants, such as China and India.

security partners are asked to ensure their national territory is not a source of proliferation threats

Broadening participation is one challenge facing the PSI community and is also the key to expanding the initiative's operational reach, improving operational capacity, and increasing responsiveness to interdiction opportunities. Wider participation in the Asia-Pacific region is one priority. The importance of this region cannot be overstated; one of the most dynamic hubs of the global economy, it is home to some of the world's busiest ports, airports, shipping lanes, and transshipment centers, including some that figured prominently in the A.Q. Khan nuclear black market.

Elements of NATO's Multinational CBRN Battalion conduct decontamination exercise

Supreme Headquarters Allied Powers Europe

While an increasing number of Asian states are participating in PSI activities, such as the October 2007 Pacific Shield 07 exercise off the coast of Japan, several key regional powers remain reluctant to embrace PSI. These include India, Malaysia, Indonesia, China, and South Korea. The reasons vary. The Indian government faces domestic political pressure to resist participating in a U.S.-led initiative that some view as inconsistent with India's foreign policy independence. The government of Malaysia has expressed concern about both the legality of PSI and the prospect of increased international involvement in the Straits of Malacca—a concern shared by Indonesia.[2] Additionally, some reports note that these and other Asian governments may be suspicious of U.S. intentions with respect to PSI given that Washington has not ratified the United Nations (UN) Convention on the Law of the Sea.[3] China and South Korea are more concerned about how North Korea might react to their participation in PSI, especially at a time when the ultimate outcome of the Six-Party Talks remains uncertain.

There have been calls, including from President Bush, to expand the scope of PSI to include interdiction of financial payments between proliferators and their suppliers, and proliferation networks more broadly.[4] Others have argued that the informal nature of PSI limits its effectiveness and sustainability and should yield to some type of standing organization, formal membership, and more institutionalized means of communication.[5] More severe critiques suggest that the impact of PSI has been exaggerated and that resources and political capital are better directed toward more aggressive efforts to secure WMD materials at their source.[6]

G–8 Global Partnership against the Spread of Weapons and Materials of Mass Destruction. The Global Partnership offers a different model of international cooperation, one that leverages the unique capabilities of more prosperous nations to implement targeted WMD risk reduction programs. Established at the Group of Eight (G–8) summit in 2002 in Kananaskis, Canada, the Global Partnership committed the G–8 nations to raise up to $20 billion by 2012 to support projects addressing nonproliferation, disarmament, counterterrorism, and nuclear safety and security, principally in Russia but also in other countries. By 2004, an additional 13 European and Asian nations as well as the European Union (EU) had joined the partnership and pledged financial contributions toward the $20 billion goal, which now appears to be within sight.[7] Even taking into account the $10 billion pledged by the United States, securing these commitments in full will represent a significant infusion of global resources toward combating WMD and a greater degree of burdensharing.

In its sixth year, the Global Partnership is generally viewed as a mixed success. Focused on securing or eliminating WMD materials at their source, Global Partnership programs have contributed directly to reducing WMD threats in the areas of chemical weapons destruction, nuclear submarine dismantlement, physical protection of nuclear materials, fissile material disposition, and employment of former weapons scientists.

Progress in these areas notwithstanding, much work remains to be done to realize the full potential of the Global Partnership. While the original goal of $20 billion is close to being achieved, by most accounts it is clear that considerably more will be required to complete specific projects and more broadly to achieve threat reduction progress commensurate with partnership goals. More fully translating funding commitments into actual programs remains a challenge as well. A recent review of Global Partnership activities concluded that about $8 billion had been expended through early 2007.[8] Greater emphasis is needed on reducing nuclear and biological terror threats. Finally, G–8 leaders must give serious consideration to expanding the Global Partnership to include both new donors and new recipients, so assistance in reducing WMD threats can be made available wherever needed.

United Nations Security Council Resolution 1540. United Nations Security Council (UNSC) Resolution 1540 represents yet another approach to global collaboration. Rather than a political initiative designed to marshal a coalition of the willing, it provides a universal framework for all states to develop and implement measures to prevent proliferation. Adopted unanimously in April 2004, Resolution 1540 established for the first time binding obligations on UN member states to refrain from supporting by any means nonstate actors seeking to produce or acquire WMD, to criminalize the proliferation of WMD to nonstate actors, and to adopt and enforce effective domestic controls on WMD, their means of delivery, related materials, and means of financing proliferation activities. To raise awareness of Resolution 1540 and oversee its implementation, the UNSC 1540 Committee was established. On April 25, 2008, the Security Council reaffirmed its commitment to the resolution and directed the committee to intensify its implementation efforts.

More than 140 states have submitted initial reports on the steps they have taken or plan to take to implement Resolution 1540. Efforts are being made through regional outreach activities to encourage and assist the roughly 50 states—largely in Africa, the Caribbean, and the Pacific—that have yet to submit initial reports. While some states have the means to meet these obligations on their own or with modest help, many countries have limited capacity and will require significant assistance. Gaps in implementation include areas such as accounting, physical protection, law enforcement, border controls, export and transshipment controls, and financial controls.[9] While progress has been made, 4 years after its adoption it is clear that implementation of Resolution 1540 will be a long-term process requiring sustained political commitment and the broadest possible degree of international cooperation.

The 1540 Committee increasingly serves as a clearinghouse for facilitating needed assistance in capacity-building, matching requests for and offers of assistance, and actively promoting the role of donor nations, international and regional organizations, multilateral export control regimes, nongovernmental organizations, and academia. Aggressively mobilizing and targeting available expertise and resources are perhaps the major challenges facing the committee as it seeks to develop a coherent and innovative strategy based on tailored outreach and assistance efforts and the development of national action plans and roadmaps.[10] Going forward, the committee and the Security Council will need to address a number of important issues, including metrics for compliance and

Asian governments may be suspicious of U.S. intentions with respect to the Proliferation Security Initiative given that Washington has not ratified the UN Convention on the Law of the Sea

evaluation, implementation priorities, and the committee's mandate and authorities for facilitating assistance from the international community.

Targeted Financial Measures. Disrupting the financial flows that fuel proliferation is a powerful new tool that the international community is using with growing sophistication. Regular coordination between security agencies and finance ministries is now an imperative. Like terrorists, proliferators require access to the global financial system and routinely abuse this system to bankroll their activities. Institutions and individuals enabling this abuse are subject to pressure and sanctions that, if properly targeted, can impede the ability of proliferators to operate. It is important to distinguish such measures—which are directed at individuals, key regime members, front companies, and financial institutions—from more traditional, broad-based sanctions regimes, which tend to target entire countries and therefore are less likely to be widely accepted by governments and other international actors.

Recent actions suggest that targeted financial measures can be effective in exposing and complicating the WMD activities of states of concern and even influencing their policies. The government of North Korea, for example, clearly was surprised by the disruptive effects of actions taken against a Macao-based bank that Pyongyang used to support illicit activities. The designation, in September 2005, of Banco Delta Asia (BDA) as a "primary money laundering concern" led the bank to freeze $25 million in North Korean assets. More consequentially, it also led a number of financial institutions to curtail or terminate business with both the bank and the regime in Pyongyang.[11] This targeted financial measure ultimately created leverage in the Six-Party Talks, as U.S. negotiators were able to use the promise to lift the designation against BDA and work to release the funds as a bargaining chip in reaching the denuclearization agreement announced in February 2007.[12]

Both unilateral and multilateral actions and authorities underpin the increasing use of targeted financial measures. In the United States, Executive Order 13382, issued in June 2005, is designed to freeze proliferators' assets that come under U.S. jurisdiction and deny proliferators access to the U.S. financial system. To date, 35 entities and 3 individuals have been designated for their links to WMD-related activities in Syria, North Korea, and Iran. The United States most recently expanded this list in October 2007, designating a number of Iranian individuals and entities, including two state-owned banks, the Islamic Revolutionary Guard Corps (IRGC), and the Ministry of Defense and Armed Forces Logistics.[13] Two additional entities, including the foreign operations arm of the IRGC, were designated under a different executive order focused on support to terrorism.

Even on their own, U.S. actions can have a global impact, given the central role of the dollar and U.S. institutions in the international financial system. But achieving wider and more lasting effects requires a sustained international response. Increasingly, as finance ministries around the world have become sensitized to the problem, multilateral actions are enhancing U.S. efforts. Four UN Security Council resolutions adopted since 2006 provide the basis for designating and freezing the assets of entities and individuals linked to the WMD programs of North Korea and Iran.[14] The European Union has enacted two rounds of its own sanctions, expanding the list of entities and individuals cited by the United Nations and adopting more far-reaching measures to limit arms sales and travel by Iranian officials.[15] Additionally, in October 2007, the Financial Action Task Force, a group of 34 states working to combat money laundering and financing of terrorism and proliferation, advised financial institutions of its member states to consider the risks in doing business with Iran and adopted guidelines for member states for implementing the financial measures in UNSC Resolution 1737.[16]

While implementation of UN and EU measures has been uneven, by many accounts financial measures directed at Iran are having some impact. A growing number of banks are unwilling to conduct business with Tehran. According to U.S. officials, foreign-based branches and subsidiaries of Iranian-owned banks are increasingly isolated, and there has been a significant drop in foreign investment—particularly in the energy sector, where Iran needs overseas partners to develop its oil reserves. That said, it is uncertain how effective targeted financial measures directed at Iran ultimately will be. The November 2007 National Intelligence Estimate on Iran's nuclear intentions and capabilities suggested that international pressure and scrutiny may influence Iranian decisionmaking.[17] If true, the expansion of targeted financial sanctions may prove an effective instrument in shaping Tehran's calculus. At the same time, the effect of financial measures may be mitigated by high oil revenues and steps taken to limit the impact of sanctions on the regime and the economy.[18] Even taking these uncertainties into account, the emergence of targeted financial measures directed at proliferators sends a strong signal that the international community is prepared to act collectively against those who would abuse the global financial system.

disrupting the financial flows that fuel proliferation is a powerful new tool that the international community is using with growing sophistication

Global Initiative to Combat Nuclear Terrorism. The Global Initiative seeks to strengthen mechanisms for multilateral and bilateral cooperation to prevent nuclear terrorism and to provide the practical means to implement measures codified in recently adopted international legal frameworks—in particular, the International Convention for the Suppression of Acts of Nuclear Terrorism, Convention on the Physical Protection of Nuclear Material and Nuclear Facilities, and United Nations Security Council Resolutions 1373 and 1540.[19] Spearheaded by the United States and Russia, the Global Initiative recognizes that nuclear terrorism threatens not only a handful of states, but also all responsible nations, and thus requires coordinated action to enhance national and international capacity. Announced by Presidents George W. Bush and Vladimir Putin in July 2006, the initiative emphasizes improving capabilities in the following areas:

- accounting, control, and physical protection of nuclear and radioactive materials
- security of civilian nuclear facilities
- detection, search, confiscation, and safe control
- denying safe haven and financial resources to nuclear terrorists
- national legal and regulatory frameworks
- response, mitigation, and investigation
- information-sharing.[20]

As of July 2008, 75 nations had joined the Global Initiative. Members endorsed a Statement of Principles in November 2006, considered an initial work plan in February 2007, and in June 2007 identified more than two dozen specific activities to be conducted through 2008—to include expert meetings, tabletop and field exercises, and various forms of mutual assistance—designed to critically assess and enhance capabilities across all of the initiative objectives. A number of capacity-building activities have been completed, and the United States is engaged in bilateral discussions with a number of governments on intelligence-sharing, joint exercises, and training. The Department of State is establishing specialized partner capacity-building teams located at U.S. Embassies to provide tailored, task-specific technical and operational assistance to partners. At their June 2008 meeting in Madrid, members expanded their work plan and agreed to work toward greater cooperation between counterproliferation and counterterrorism communities, a strengthened exercise program, and enhanced efforts in detection and forensics.

As the Global Initiative adds partners and implements its work program, it can serve as a framework or umbrella for a broad range of discrete activities that can involve all members or subsets of interested members. But it will be important to harmonize this work with parallel efforts to reduce nuclear threats. Additionally, the private sector has an important role to play, not least with respect to the security of civilian nuclear power facilities, suppression of illicit trafficking through key transport nodes, and advanced technology development.

the effect of financial measures may be mitigated by high oil revenues and steps taken to limit the impact of sanctions

Global Nuclear Energy Partnership (GNEP). This partnership seeks to address a specific WMD challenge: the proliferation risks associated with the expansion of civilian nuclear power. The GNEP seeks to marshal advanced nuclear technologies to facilitate this expansion in a way that limits proliferation dangers. Among its key features are the development of proliferation-resistant technologies to recycle spent fuel, so as to avoid creating large new stocks of weapons-usable materials, and the creation of a fuel services consortium to provide an assured supply of fresh reactor fuel to and recovery of used fuel from nations that forego independent enrichment and reprocessing capabilities. In this way, it is hoped that emerging nuclear power needs can be met while limiting the spread of the most sensitive fuel cycle technologies that can support the manufacture of nuclear weapons.

Since it was unveiled by the Department of Energy in February 2006, GNEP has generated significant debate on a number of fronts, including the degree to which the technologies it is promoting are in fact proliferation-resistant, waste management challenges, the merits of moving quickly toward commercial-scale facilities, and nonproliferation risks associated with recycling plutonium. More work is required to examine and validate the

Beriev Be-200 amphibious plane participates in Russian-NATO joint antiterrorism exercise Kaliningrad 2004

NATO

technology concepts behind GNEP as part of a longer-term research and development effort. Accordingly, prudence suggests that nonproliferation efforts, such as planning for future safeguards requirements, proceed on the assumption that the goals of GNEP may change over time or may not in the end fully be achieved.[21]

In any case, nonproliferation benefits that might be realized through the technology innovations envisioned by GNEP are probably decades away. Progress toward establishing a nuclear fuel services consortium can be achieved far more quickly, but here the challenges are more political in nature. There is by now widespread appreciation that the growing sense of urgency about the need to limit the spread of enrichment and reprocessing technologies while accommodating growing interest in nuclear power.[22] Both the security and economic rationales are strong. States choosing to pursue nuclear power principally for energy purposes must be given an economically attractive option, one that does not require developing a closed fuel cycle and making a huge investment in fuel production, storage, and disposal capabilities. The fuel services consortium envisioned in GNEP, as well as similar initiatives proposed by others, emphasizes economic incentives and reduced risk for states and would be voluntary rather than codified as part of the international nonproliferation regime.[23]

Co-chairmen of Global Initiative to Combat Nuclear Terrorism announce endorsement of Statement of Principles

U.S. State Department

the center of gravity of the proliferation problem is the "loophole" in the Non-Proliferation Treaty that allows nuclear aspirants to develop the means to manufacture nuclear weapons under the cover of civilian power programs

Still, many nations will resist any effort perceived as limiting their access to peaceful nuclear technology as discriminatory and contrary to their rights under the NPT. While the GNEP Statement of Principles is clear that participating states will not forfeit any rights, the initiative is nonetheless viewed by many in the context of President Bush's 2004 call to the Nuclear Suppliers Group to permanently deny enrichment and reprocessing technologies to states that do not already possess them, even if these states are members in good standing of the NPT.[24] Thus, the fear persists that GNEP will lead to a permanent two-tier system comprised of those who provide enrichment services and those who must purchase them. In this context, the possibility exists that GNEP will actually stimulate interest on the part of some states to acquire independent enrichment capabilities. Taking these considerations into account, International Atomic Energy Agency Director General Dr. Mohamed ElBaradei's proposal to create a multilateral framework for the nuclear fuel cycle leading, through a phased process, to the conversion of enrichment and reprocessing facilities from national to multilateral operations may be a more politically palatable approach for some, even if it is more cumbersome to bring to fruition.[25]

Twenty-one countries have become members of GNEP, though a number of important nuclear energy states—including Argentina, Brazil, India, and South Africa—have chosen not to join.

Security Cooperation

U.S. strategy for combating proliferation has long recognized the importance of engaging with allies and other security partners to increase the capacity of friendly states to assist in preventing, deterring, defending against, and responding to WMD threats. Security cooperation and building partner capacity have become increasingly salient elements in defense strategy in general, and in the parallel campaigns against global terrorism and WMD in particular. Capable partners can reduce the burden on U.S. forces and contribute to regional and global defense in depth. The 2006 Quadrennial Defense Review highlights the importance of improving partner capabilities, and recent defense guidance directs that security cooperation be more tightly integrated into the operational plans developed by the geographic combatant commands (GCCs) to achieve national security goals.

The 2006 *National Military Strategy to Combat Weapons of Mass Destruction* emphasizes the importance of security partners both to the military's role in nonproliferation activities and to coalition operations to counter WMD in peacetime or as part of a regional contingency.[26] To better focus partnership activities in support of combating WMD missions, the Defense Department is crafting a supporting strategy to build partner capacity and integrate the broad range of activities already under way or needed to take security cooperation to the next level. This strategy, still in development, recognizes that partner activities must be organized to maximize limited resources in addressing the most serious WMD challenges. It envisions a criteria-driven process to prioritize capacity-building goals and identify the most important partner relationships. It calls for building on existing initiatives, coordinating the activities of the GCCs, and encouraging selected partners to assume regional leadership roles. Within the GCCs, tailored approaches to security cooperation and partner activities have been taking shape for a number of years.

U.S. European Command (USEUCOM) has established a number of multinational forums (called *clearinghouses*) that serve as vehicles for theater engagement and coordina-

tion. The objective is to maximize collaboration with limited resources by organizing at the subregional level. Three clearinghouses have been established. The Southeast Europe clearinghouse encompasses Albania, Croatia, and Macedonia (the Adriatic Charter nations), as well as Bosnia and Herzegovina, and Serbia and Montenegro. The South Caucasus clearinghouse serves as a forum to coordinate security cooperation with Armenia, Azerbaijan, and Georgia. The Africa clearinghouse joins 13 African nations with USEUCOM, the North Atlantic Treaty Organization (NATO), the European Union, and the United Nations.[27]

In NATO, members committed in 2002 to improve capabilities to fight new threats such as terrorism and WMD. The Prague Capability Commitments included a pledge to enhance national and collective capabilities to defend against chemical, biological, radiological, and nuclear (CBRN) weapons. Not all the initiatives identified at that time have come to fruition, but NATO has nonetheless taken some important steps to develop a WMD defense concept and improved operational capabilities.[28] NATO's Multinational CBRN Defence Battalion is intended to be a high-readiness unit able to deploy quickly to support NATO missions of any kind in any location. Thirteen nations are represented in the battalion, which achieved full operational capability in June 2004 and is capable of reconnaissance, detection, sampling, and decontamination operations. The Joint CBRN Defence Centre of Excellence opened in November 2007 in Vyskov, Czech Republic, to serve as a multinational resource for expertise, education and training, and the development of concepts, doctrine, lessons learned, and standards. Eight nations participate in the Centre, which is working toward accreditation for its education and training activities. On a different track not tied to the 2002 Prague commitments, the Alliance continues to investigate technical and operational concepts for a layered theater ballistic missile defense.

U.S. Pacific Command (USPACOM) engagement strategy emphasizes partner capacity-building in areas such as interdiction, WMD elimination, implementation of UNSC Resolution 1540, consequence management, and WMD terrorism. Bilateral working groups are one focus. With Japan, USPACOM and the Office of the Secretary of Defense have established a CBRN Defense Working Group whose objective is to improve the readiness and interoperability of U.S. and Japanese forces to conduct operations in the event of a WMD attack, to include consequence management operations. Recent activities have addressed issues such as decontamination, WMD medical preparedness, and opportunities for cooperative research and development. A Counterproliferation Working Group established with South Korea is focused on developing WMD elimination capabilities.[29] USPACOM is also working with the Philippines to deny terrorist networks the ability to obtain WMD capabilities as part of its regional war on terror engagement strategy.

The command also participates in the Multilateral Planning and Augmentation Team (MPAT), a cadre of military planners from 33 nations with interests in the Asia-Pacific region. MPAT facilitates the rapid establishment and/or augmentation of multinational coalition task force headquarters, concentrating on smaller scale contingencies and operations other than war, including terrorism. MPAT also emphasizes developing standard operating procedures to guide multinational responses to crises, including contingencies involving CBRN and toxic industrial materials. Recognizing that effective crisis planning and response cannot be managed by defense ministries alone, MPAT engages with a number of international organizations, nongovernmental organizations, and UN agencies that have become integral to its work.[30]

U.S. Central Command (USCENTCOM) builds on largely bilateral activities to encourage host nations to develop integrated civil-military response capabilities. While some multilateral structures exist, advancing a broad-based multilateral strategy is difficult given the politics of the region and the degree of mistrust that exists among some governments. The command leverages a diverse set of activities at the tactical, operational, and strategic levels:

- Commander, USCENTCOM, visits to host nation senior military and civilian officials, including chiefs of defense staff
- Cooperative Defense Program workshops and exercises in passive defense, consequence management, medical countermeasures, missile defense, and shared early warning
- international military education and training
- foreign military sales
- bilateral Air Defense Initiative to develop common approaches to the regional missile threat
- International Counterproliferation Program
- Proliferation Security Initiative
- Regional Disaster Management Center of Excellence in the Horn of Africa
- Disaster Preparedness Program in Central and South Asia
- host nation partnerships with state National Guard units in the United States.

Mind the Gap. The GCCs are well engaged in the effort to build partner capacity and strengthen cooperative activities. Perhaps the most important challenge to sustaining effective theater engagement is the growing perception among some partners of a capabilities gap with the United States—a belief that, regardless of their force modernization efforts, they will continue to fall further behind an increasingly sophisticated U.S. military. This is true for both conventional warfighting capabilities and more specialized areas of the combating WMD mission. The implications of this (real or perceived) gap are potentially serious if partners otherwise willing to assume regional security burdens come to believe they are unable to because they cannot operate effectively with U.S. forces. Going forward, security cooperation policies should focus on this problem, especially with our most important partners.

the Prague Capability Commitments included a pledge to enhance national and collective capabilities to defend against chemical, biological, radiological, and nuclear weapons

The Way Ahead

Initial progress in advancing new types of international cooperation for combating WMD is promising, but there remain major challenges to developing a network of partnership activities that can be sustained over the long term. The efforts of the last several years have provided a strong beginning, but more must be done to ensure these initiatives take root and continue to offer meaningful collaboration with practical security benefits. A number of questions merit attention.

Are there too many initiatives asking too much of countries that have limited capacity?

The multiplicity of initiatives reflects the complexity of the threat and the aggressive search for innovative means to attack it. Engaging the international community broadly across the many dimensions of the problem (political, military, financial, legal) requires putting in place a range of mechanisms for collaboration. From the U.S. perspective, there is merit in such an approach: it provides flexibility in marshalling small or large groups of partners into coalitions to work specific problems and thus enables tailored strategies. At the same time, the sheer number of combating WMD initiatives can place strains on the ability of states to contribute. This is revealed by the gap, in some cases, between commitments and actions. Where we have a strong stake in an initiative, addressing capacity problems should be a policy priority.

Will these initiatives have staying power? It is reasonable to ask whether the commitments nations have made can be sustained over the longer term. At one level, this is a political challenge for the United States. Some nations question whether the United States will remain committed to this general approach to the WMD problem, and to specific initiatives, particularly given the change in administrations in 2009. In the policy reviews that will take place, which programs will remain priorities? This concern underscores the recognized leadership role of the United States in forging international collaborative efforts. If the United States does not continue to push on key initiatives and exert leadership, the political commitments other states have made could weaken. Washington must remain mindful of the fact that for many governments, participating in U.S.-led initiatives entails a considerable political and resource investment, especially at a time when there is significant anti-American sentiment. For its part, it is reasonable for the United States to ask who else will step forward to assume a leadership role in this arena. Washington has facilitated leadership opportunities for states within the framework of existing cooperative efforts, but who will offer the next compelling idea for a partnership initiative?

At another level, the question of staying power is an organizational and management challenge. Can activities that by design have no permanent standing support organization be self-perpetuating? What is the minimum degree of institutional structure required to ensure sustainability? Is the U.S. Government organized to manage the growing number of partnership activities effectively? The "policy entrepreneurship" that gave rise to the wide range of initiatives now under way is essential to devising innovative approaches to tough policy challenges. At some point, however, there also may be a need for more formal or centralized coordination of these activities to ensure unity of effort.

How can other important stakeholders be integrated? Despite broad involvement by nations and international bodies in many new initiatives, there is room to expand participation in the global network of combating WMD partnerships that can enhance both its effectiveness and its legitimacy.

First, better integration of *rising powers*, in particular China and India, could yield important benefits. These states are not isolated from the partnership network, but neither are they fully integrated. With growing power and influence, they are emerging as regional political and economic leaders, have growing infrastructures in critical sectors such as nuclear energy and biotechnology where proliferation risks could emerge, and are increasingly influential players in other relevant commercial sectors (such as international finance and banking). Bringing them more fully into the mainstream of global combating WMD efforts could build on existing areas of cooperation, such as the Six-Party Talks in the case of China, and a number of bilateral U.S.-India activities. Similarly, Washington should consider how best to include less powerful but still potentially important nations in regions such as Southeast Asia, Africa, and South America. These regions may appear less strategically important today from a proliferation standpoint but could emerge in the future as areas of concern.[31]

Second, the *private sector* has a large stake in managing the proliferation problem. WMD events of even less-than-catastrophic proportion could have a dramatic impact on global commerce and put at risk key sectors and individual businesses. Participating in proliferation-related transactions and networks, even unwittingly, can cost businesses and banks dearly, both financially and in reputation. Moreover, the business community may possess unique sources of information about WMD-related activities. In some areas, the private sector already is an important partner; the major effort of recent years to secure the global maritime supply chain relies critically on extensive cooperation with private port operators. As another example, the United States has enlisted the support of the private banking sector to facilitate targeted financial measures against selected organizations and individuals in Iran. More can be done to mobilize the business community as a full partner in combating WMD, including encouraging private sector entities to endorse key international initiatives, developing partnerships with critical industries that have the potential to shape the proliferation landscape, promoting industry adoption of best practices and codes of conduct, and improving public-private information-sharing.

Third, with respect to the *global community of interest*, experience has demonstrated that no one country or national intelligence apparatus has sufficient information to understand fully all aspects of the WMD challenge. Indeed, intelligence agencies operating largely on the basis of classified information will see at best only some pieces of the puzzle. There is a growing appreciation of the need to exploit more aggressively and systematically the broader reservoir of knowledge that exists among experts around the world, both in and out of government. Tapping this tacit knowledge requires creating a networked WMD community of interest. A promising example of this approach is the Global Futures Forum, an initiative of the Central Intelligence Agency to create a collaborative body, both virtual and face-to-face, for multidisciplinary strategic level dialogue and research. In addition to proliferation, communities of interest are being established around such related problems as radicalization, terrorism and counterterrorism, illicit networks, pandemics, and social networking.

Quo Vadis 2009?

A new U.S. administration will want to put its own mark on the nonproliferation and combating WMD agenda and can be expected to make changes and adjustments. With respect to partnership activities, objective assessments should yield useful lessons about both the forms of cooperation and the challenges to achieving real impact on the ground. They also should conclude that international cooperation is only increasing in importance and that the concerted effort to put in place a matrix of partnership activities has in fact yielded benefits. Building on success should therefore be a guiding principle for the new team taking the reins of national policy. Even for those initiatives that have had a productive track record, a strong effort will be required to sustain the political commitment and

practical engagement of security partners both large and small. Indeed, the many partners that have joined various elements of the fight against WMD will be watching carefully for significant changes in the direction and emphasis of U.S. policy. The next administration should give early attention to these issues, with an eye toward establishing a framework for action that will strengthen the international consensus that has enabled the considerable degree of practical cooperation achieved in recent years. **JFQ**

NOTES

[1] For a discussion of how globalization is shaping proliferation dynamics, see Kenneth D. Luongo and Isabelle Williams, "The Nexus of Globalization and Next-Generation Nonproliferation," *Nonproliferation Review* 14, no. 3 (November 2007), 459–473.

[2] See Stephanie Lieggi, "Proliferation Security Initiative Exercise Hosted by Japan Shows Growing Interest in Asia But No Sea Change in Key Outsider States," *WMD Insights*, issue 21 (December 2007–January 2008), available at <www.wmdinsights.com/I21/I21_EA1_ProliferationSecurity.htm>.

[3] Ibid. The article goes on, "[T]his concern is intensified by arguments of U.S. pundits opposed to UNCLOS warning that ratification would endanger PSI activities. According to officials from the Bush administration, which now favors U.S. ratification of the convention, Malaysia and Indonesia have both given indications that they would be more willing to participate fully in PSI if the United States joined the sea convention."

[4] President George W. Bush, remarks on weapons of mass destruction proliferation, Lisbon, March 5, 2004.

[5] See Alex Reed, "The Proliferation Security Initiative: Too Much, Too Soon," The Henry L. Stimson Center, August 13, 2007, available at <www.stimson.org/pub.cfm?id=533>.

[6] Ibid.

[7] See Paul F. Walker, "Looking Back: Kananaskis at Five—Assessing the Global Partnership," *Arms Control Today* (September 2007), for a recent unofficial accounting of Global Partnership commitments. See also the Global Partnership Resource Page maintained by the James Martin Center for Nonproliferation Studies at <cns.miis.edu/research/globpart/funding.htm>. Nearly $18 billion has been made.

[8] Walker.

[9] Resolution 1540 (2004), S/2006/257, United Nations.

[10] United Nations Security Council, 5806th meeting, December 17, 2007, briefings by Chairmen of subsidiary bodies of the Security Council, 5–7 (S/PV.5806).

[11] As reported by Patrick Murphy, Leonard S. Spector, and Leah R. Kuchinsky, "Special Report: Financial Controls Emerge As Powerful Nonproliferation Tool; North Korea and Iran Targeted," *WMD Insights*, issue 15 (May 2007), available at <www.wmdinsights.com/PDF/WMDInsights_May07Issue.pdf>.

[12] Ibid.

[13] The White House, Executive Order 13382, "Blocking Property of Weapons of Mass Destruction Proliferators and Their Supporters"; and U.S. Department of State Fact Sheet, "Designation of Iranian Entities and Individuals for Proliferation Activities and Support for Terrorism," October 25, 2007, available at <www.state.gov/r/pa/prs/ps/2007/oct/94193.htm>, list designations as of December 26, 2007. See also Peter Crail, "UN Iran Sanctions Decision Awaits," *Arms Control Today*, November 2007.

[14] The Security Council resolutions pertaining to North Korea are 1695 and 1718. Those pertaining to Iran are 1737 and 1747.

[15] Michael Jacobson, "Raising the Costs for Tehran," The Washington Institute for Near East Policy, *PolicyWatch*, no. 1324, January 3, 2008, available at <www.washingtoninstitute.org/templateC05.php?CID=2700>.

[16] "Guidance Regarding the Implementation of Activity-Based Financial Prohibitions of United Nations Security Council Resolution 1737," Financial Action Task Force on Money Laundering, October 12, 2007. See also "Guidance Regarding the Implementation of Financial Provisions of United Nations Security Council Resolutions to Counter the Proliferation of Weapons of Mass Destruction," June 29, 2007.

[17] National Intelligence Council, "Iran: Nuclear Intentions and Capabilities," November 2007, key judgments, available at <www.dni.gov/press_releases/20071203_release.pdf>.

[18] Measuring the impact of sanctions, including financial sanctions, is recognized as a difficult task. The December 2007 report by the U.S. Government Accountability Office (GAO) questioned the impact of financial measures directed at Iran and argued for a more systematic effort to evaluate their effectiveness. See "Iran Sanctions: Impact in Furthering U.S. Objectives Is Unclear and Should Be Reviewed, GAO-08-58, December 2007, available at <www.gao.gov/new.items/d0858.pdf>. Some commentators challenged the GAO's methodology and findings. See, for instance, Matthew Levitt, "GAO Misleads on Iran Sanctions," The Washington Institute for Near East Policy, January 17, 2008, available at <www.washingtoninstitute.org/templateC06.php?CID=1122>.

[19] The White House, "Joint Statement by U.S. President George Bush and Russian Federation President V.V. Putin," July 15, 2006.

[20] See U.S. Department of State, "Statement of Principles for the Global Initiative to Combat Nuclear Terrorism," November 20, 2006, available at <http://www.state.gov/t/isn/rls/other/76358.htm>, and "U.S.-Russia Joint Fact Sheet on the Global Initiative to Combat Nuclear Terrorism," July 15, 2006, available at <www.state.gov/t/isn/rls/fs/69062.htm>.

[21] See "Falling Behind: International Scrutiny of the Peaceful Atom," Report of the Nonproliferation Policy Education Center on the International Atomic Energy Agency's Nuclear Safeguards System, September 2007, 8.

[22] Legislation under consideration in the U.S. Senate, "Nuclear Safeguards and Supply Act of 2007" (S 1138), includes the following "Declaration of New Policy": "It shall be the policy of the United States to discourage the development of enrichment and reprocessing capabilities in additional countries, encourage the creation of bilateral and multilateral assurances of nuclear fuel supply, and ensure that all supply mechanisms operate in strict accordance with the IAEA safeguards system and do not result in any additional unmet verification burdens for the system."

[23] See Christopher A. Ford, "The Promise and Responsibilities of Peaceful Uses of Nuclear Energy," remarks to the 19th Annual United Nations Conference on Disarmament Issues, U.S. Department of State, August 27, 2007.

[24] President George W. Bush, remarks on Weapons of Mass Destruction Proliferation, The White House, February 11, 2004.

[25] "A New Framework for the Nuclear Fuel Cycle," statement at the Special Event on the Nuclear Fuel Cycle by International Atomic Energy Agency (IAEA) Director General Dr. Mohamed ElBaradei, September 19, 2006. In December 2007, Congress authorized and appropriated $50 million toward the establishment of an international fuel bank to be managed by the IAEA.

[26] Chairman of the Joint Chiefs of Staff, *The National Military Strategy to Combat Weapons of Mass Destruction* (Washington, DC: The Joint Staff, February 13, 2006), 26–27.

[27] Presumably the Africa clearinghouse will transition to the recently established U.S. Africa Command.

[28] Initiatives identified for the 2002 Prague Summit were Deployable Analytical Laboratory, NBC Event Response Team, Virtual Centre of Excellence for NBC Defence, Biological and Chemical Defence Stockpile, and Disease Surveillance System.

[29] *WMD elimination* refers to activities to systematically locate, characterize, secure, disable, and/or destroy a state or nonstate actor's WMD programs and related capabilities.

[30] The MPAT Web site can be accessed at <www1.apan-info.net/Default.aspx?alias+www1.apan-info.net/mpat>.

[31] Department of State International Security Advisory Board, "Report on Building International Coalitions to Combat Weapons of Mass Destruction," February 5, 2007, 10, available at <www.state.gov/documents/organization/66363.pdf>.

MISSILE DEFENSE and NATO Security

By PEPPINO A. DEBIASO

Iran tests Shahab-3 missile

Iranian Students News Agency (Roohola Vahdati)

Armed with weapons of mass destruction (WMD), the global proliferation of ballistic missiles is introducing more widely the means of modern strategic warfare that were once the purview of only a small number of countries. This transformation in the security environment raises new questions for the North Atlantic Treaty Organization (NATO) on the strategic implications of defending its territory against ballistic missile attack. During the recent summit in Bucharest, Romania, the Alliance acknowledged for the first time that missile defense can make a contribution to protecting NATO territory, including its populations, from attack. Consequently, NATO is undertaking an intensive examination of the issues associated with a comprehensive continental defense against ballistic missiles to enable it to counter future military risks.

Emerging Security Environment

The threats to the security of the United States and its NATO allies have changed significantly since the early 1990s and the demise of the Soviet Union. A broader and more complex range of challenges confronts the Alliance today. Prominent among these are the proliferation of destructive technologies, such as nuclear, biological, and chemical weapons and the ballistic missiles to deliver them at great distances. Ballistic missiles capable of carrying WMD have become the weapon of choice for an increasing number of states who view them as low-cost, high-impact arms capable of offsetting Western military advantages. And the danger they pose is expanding in Northeast and South Asia, as well as the Middle East. In

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the 1970s, at the height of the Cold War, nine nations possessed ballistic missiles. Today, more than 20 states have these weapons. Furthermore, these missiles are undergoing improvements in range, accuracy, mobility, and ability to carry a variety of conventional and unconventional warheads. Over the past decade, in addition to the roughly two dozen states operating short-range ballistic missiles (up to 1,000 kilometers [km]), the number of countries with medium-range (1,000–2,500 km), intermediate-range (2,500–5,500 km), or intercontinental-range (greater than 5,500 km) ballistic missiles has increased from five to nine. Not only has the number of nations possessing ballistic missiles been growing, but this group also includes some of the most dangerous regimes, such as North Korea and Iran.

North Korea has an ambitious ballistic missile development program and is a major exporter of missiles and missile technology to other countries, including Iran, Syria, and Pakistan. North Korea has long possessed a large arsenal of short-range ballistic missiles (SRBMs) and medium-range ballistic missiles (MRBMs). Through the 1990s, it was also able to develop or acquire the technologies for ballistic missiles capable of striking other continents. In August 1998, it tested the three-stage Taepo Dong 1 missile in an attempt to orbit a satellite. The missile's third stage failed, but not before it flew long enough to prove that North Korea had the basic technologies necessary for longer range ballistic missiles. Pyongyang is now developing several such longer range weapons, including a new intermediate-range ballistic missile (IRBM) with a range estimated at 2,500 km. In July 2006, North Korea conducted seven widely publicized launches. It successfully fired six theater-class SRBMs and MRBMs, demonstrating the capability to conduct salvo strikes against U.S. forces in the region, as well as South Korea and Japan. The seventh missile, the Taepo Dong 2 space launch vehicle/intercontinental ballistic missile, was flown for the first time. The Taepo Dong 2, capable of carrying a nuclear payload, could reach much of the Asia-Pacific region and parts of the United States when operational. Although the Taepo Dong 2 failed shortly after launch, the test made clear the significant program North Korea has under way to build ever more sophisticated missiles with global reach.

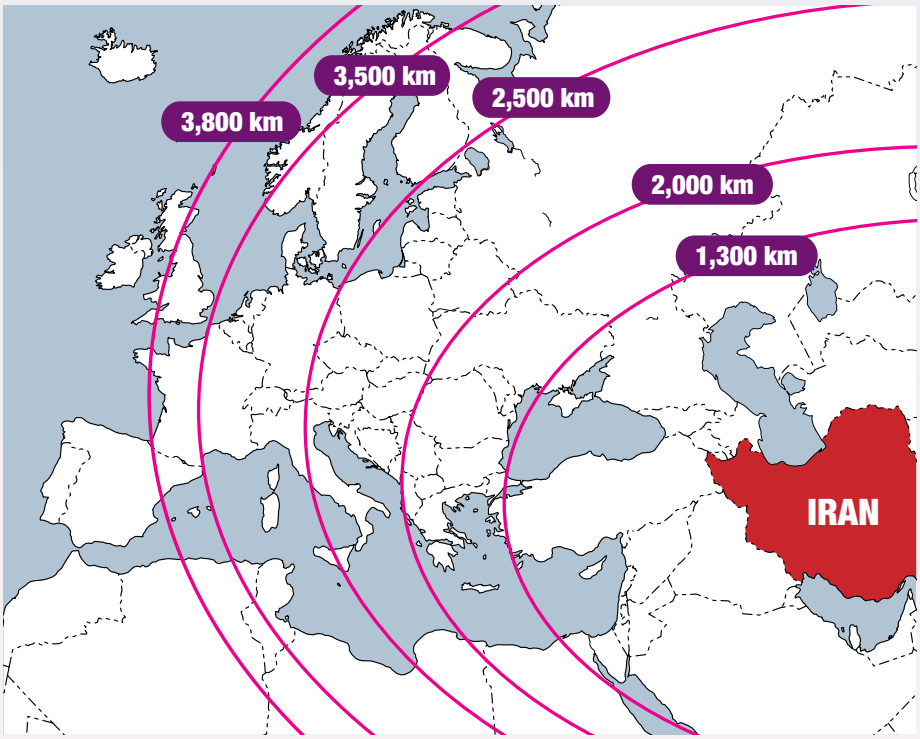
In the Middle East, while several states are fielding new and improved SRBMs and MRBMs, Iran represents the most serious concern because it unites a vigorous ballistic missile program, development of key capabilities needed to produce nuclear weapons, the demonstrated use of missile-delivered chemical weapons (against Iraq in the 1980s), and the stated desire to destroy nearby countries. Iran also has a history of support for international terrorism, especially in terms of weapons transfers. Most recently, Iran reportedly supplied the Lebanese Shi'ite militia Hizballah with both long-range rockets and short-range ballistic missiles, with the former used against civilian population centers in Israel during the conflict in 2006. Iran already has the largest inventory of SRBMs and MRBMs in the region to underpin its growing freedom of action throughout the wider Middle East.

Iran's plans to deploy longer range ballistic missiles go beyond the capacity needed to strike U.S. forces and allies in the Middle East. It is developing technology for missiles of increasing range and sophistication, which will allow it to threaten Europe. Iran is modifying its 1,300-km Shahab-3 MRBM in order to give it greater range. In 2004, it claimed that it had successfully extended the range to 2,000 km. If true, Iran can now target large portions of the Near East and Southeastern Europe, along with U.S. and NATO bases and deployed forces in Turkey and Central Asia. Tehran recently announced that a new solid propellant MRBM—the Ashoura—is in development and could begin flight testing soon. It also continues to work closely with North Korea on ballistic missiles of longer range. As a result of ongoing foreign assistance, Iran's MRBMs and IRBMs could develop more rapidly than would be possible on the basis of its indigenous capabilities. According to multiple open source reports, Tehran has acquired from North Korea 2,500-km-range missile systems. As with most ballistic missiles, the possibility to extend this range exists through improving the design of the airframe or using lighter payloads. A range increase to 3,500–3,800 km would allow Iran to reach European targets as far west as the United Kingdom. Additionally, it is continuing to develop the key technologies for an intercontinental-range ballistic missile and a space launch vehicle, giving it multiple paths to achieving weapons capable of striking the United States by the middle of the next decade.

Iran's plans to deploy longer range ballistic missiles will allow it to threaten Europe

The spread of ballistic missiles and missile technology has been accompanied by corresponding trends in the area of WMD. This is the case for two major reasons. First, there are more than 20 nations today that possess or are

Figure 1. Current and Projected Ranges of Iran's Missiles



seeking to acquire nuclear, biological, or chemical capabilities that can be carried by ballistic missiles. Second, in the past decade, the proliferation of WMD technologies and the expertise required to "weaponize" them have been accelerated by the willingness of both state and nonstate organizations to collaborate to advance these programs. This became evident with the revelation in 2003 that A.Q. Khan, known as the "father" of Pakistan's nuclear weapons program, had built an international network of suppliers and expertise over several decades to sell nuclear bombmaking design information and technology to several countries, including Iran, Libya, North Korea, and Syria.

The consequences of these activities are beginning to emerge. In October 2006, North Korea carried out a nuclear weapons test. Its progress in developing a nuclear device, along with any foreign assistance it may have received, went largely undetected. Moreover, North Korea continues to provide assistance to other states' nuclear programs as suggested by recent events regarding its cooperation with Syria on a nuclear reactor. The disclosure in 2007 that Iran had a covert nuclear weapons program for many years further highlights the difficulty of accurately predicting the emergence of new nuclear weapons states. A 2007 U.S. National Intelligence Estimate (NIE) concludes that, although Iran appears to have suspended some aspects of this program, it is keeping its options open on nuclear weapons. Indeed, Iran's ongoing pursuit of enriched uranium is the pacing element for bringing a nuclear capability to fruition. Its activities in this area, combined with its program to build longer range missiles, reflect its commitment to acquiring strategic arms.

All of these troubling indicators are characteristic of today's environment. The spread of WMD technologies along with missile delivery vehicles is increasing the strategic warfare potential of regional powers and will influence the shape of future crises and conflicts. Indeed, states have already demonstrated a willingness to use ballistic missiles to serve a variety of political and military goals. As illustrated in figure 2, there have been at least 10 conflicts since the early 1980s in which states have conducted launches against civilian as well as military targets. This also has included the employment of ballistic missiles armed with WMD that occurred when Iraq and Iran used chemical weapons in the 1980–1988 "War of the Cities," killing and injuring tens of thousands.

Responding to New Threats

The United States and its allies are considering how best to counter these new threats—namely, the prospect of catastrophic weapons in the hands of a rising number of countries with the ability to deliver them transregionally with little warning. The United States, for its part, has taken steps to field missile defenses against these arms in order to underwrite four key global security goals.

First, missile defense can serve as a valuable instrument, along with diplomatic and political measures, to combat WMD proliferation and support nonproliferation efforts. Defenses may dissuade adversaries from choosing to acquire or expand ballistic missile arsenals by negating any advantage that they might hope to achieve by building them in the first place. In the presence of defenses, ballistic missiles launched by hostile states would no longer have a "free ride" against the population centers or deployed forces of the United States and its allies. Defenses would make ballistic missiles an unwise military investment with diminishing utility. Missile defense can further strengthen the goal of nonproliferation by providing allies the means to protect themselves against a nuclear-armed adversary without having to acquire their own nuclear deterrent. This is the path Japan has taken, developing a layered missile defense in cooperation with the United States to protect its population and forces against the threat of a North Korean missile attack.

Second, missile defense provides the leadership of the United States and its allies with a wider range of responses to manage crises and conflicts beyond the immediate use of offensive weapons. This was demonstrated during the North Korean launch preparations of the Taepo Dong 2, when the United

defenses would make ballistic missiles an unwise military investment with diminishing utility

Figure 2. Ballistic Missile Use since 1980

Country	Type	Dates	Purpose
Iraq against Iranian cities	Scuds	1980–1988	Political: Incite fear in civilian population
Iran against Iraqi cities	Scuds	1985–1988	Political: Incite fear in civilian population
Libya against U.S. naval facilities in Italy	Scuds	1986	Military: Response to U.S. airstrikes on Libya
Soviet Union against mujahideen forces in Afghanistan	Scuds	1988–1991	Military: Destroy rebel forces in Afghanistan
Iraq against Israel, Kuwait, and Saudi Arabia	Scuds	1991	Political: Attempt to split coalition
Iran against Iranian dissident camps in Iraq	Scuds	1994	Military: Destroy Iranian dissidents
South Yemen against North Yemen during civil war	Scuds	1994	Military: Destroy rebel forces in North Yemen
China launches near Taiwan	CSS–6s	1995–1996	Political: Attempt to influence elections on Taiwan
Russia against targets in Chechnya	SRBMs	1999–2000	Military: Destroy rebel forces in Chechnya
Iraq against U.S.-led coalition forces	SRBMs	2003	Military: Destroy coalition forces

States placed its missile defense system on operational alert for the first time. Although still limited in its capabilities, the system was prepared to defend the United States against any North Korean long-range ballistic missile. While some national security experts called for preemptive strikes against the North Korean missile and its launch facility, missile defenses gave American decisionmakers an option beyond preemptive strikes that, in turn, contributed to stability during the crisis.

Third, missile defense, by diminishing the likelihood of a successful attack, can enhance traditional offense-based deterrence by introducing doubt and uncertainty into a potential adversary's plans to attack. By denying the achievement of the political or military goals of any contemplated threat or actual strike, defenses would reinforce the deterrence of aggression.

Finally, and most importantly, missile defense provides protection to threatened population centers and deployed forces against actual attack should deterrence and diplomacy not succeed in preventing a conflict.

The missile defense approach the United States is taking to address threats to its national territory as well as to its forces abroad involves a number of elements. To protect its troops and those of its coalition partners against shorter range missiles, the Pentagon is fielding ground- and seabased interceptors and tracking radars along with sensors on land, at sea, and in space. These include the land-based Patriot Advanced Capability–3 (PAC–3) and the Terminal High Altitude Area Defense systems for defense against short- and medium-range ballistic missiles for forward operating troops, military bases, and combat staging areas. Also being deployed are sea-based missile defense systems on *Aegis*-class ships, which will provide a mobile capability against missile attack. These are being fitted to carry the Standard Missile–3 (SM–3) interceptors to counter short- and medium-range ballistic missiles.

To defeat longer range ballistic missiles, the United States is establishing a ground-based defense system in Alaska and California. The Ground-Based Interceptor (GBI) will engage intermediate- and long-range ballistic missiles in the midcourse phase of flight hundreds of kilometers above the Earth. This ground-based defense, which is supported by space-based sensors and land- and seabased radars, will allow the United States to defend itself against missiles launched from Northeast Asia or the Middle East. The American missile defense system, with approximately 50 GBIs planned for deployment by 2013, is designed to provide a modest defense against a few tens of long-range ballistic missiles.

As ballistic missile and WMD threats change over time, so will the composition of missile defense forces. Adjustments to the number and locations of defenses will be based on new or emerging dangers. Some threats, like Libya, may recede, while others, like Iran, may grow. Given the uncertainty in forecasting the timing and location of adversaries possessing such weapons, and the many years required to build and field defenses, the United States and its allies must consider how to have systems in place before a threat fully emerges.

Missile Defenses in Europe

Against the backdrop of the global proliferation of ballistic missiles and WMD technologies, the United States is advancing a range of initiatives to extend the benefits of missile defense to its allies. As NATO comes under increased risk of ballistic missile attack, the ability of the Alliance to preserve its freedom to act across the full spectrum of military conflict—from humanitarian and peace enforcement interventions to conventional operations—will require some measure of Alliance protection. Over time, defenses that only protect the United States may lead to the decoupling of American security from that of its allies. This would undermine the indivisibility of Alliance security, which has been the bedrock of NATO since its founding. However, by *extending* protection afforded by missile defenses to Europe, it is possible to offer a set of capabilities to blunt ballistic missile/WMD coercion of NATO, thereby allowing the Alliance to more effectively deter aggression and carry out its military and security obligations.

NATO has been examining the requirements for missile defense for several years. Its past focus has been on the protection of military forces operating outside of Europe against short-range missile threats. The United States, Germany, and the Netherlands, for example, are deploying new shorter range missile defenses composed of the PAC–3 system. Italy, Germany, and the United States are jointly developing the Medium Extended Air Defense System (MEADS) to provide a mobile defense of expeditionary forces against short-range missile threats. As ballistic missile threats have evolved

State Department and Missile Defense Agency representatives give press conference after NATO-Russia Council meeting

NATO

Participants at the Bucharest Summit look for ways to link to NATO missile defense

NATO

in terms of range, technical sophistication, and payload, allies have started to examine longer range missile defenses. Toward this end, in 2001 NATO initiated a major technical feasibility study to define an architecture for protecting Alliance deployed forces operating outside of NATO territory against ballistic missile threats of up to 3,000 km. Known as the Active Layered Theater Ballistic Missile Defense (ALTBMD) program, this effort was completed in 2003. The following year, the supporting technical blueprint and required funding were approved by NATO defense ministers to begin building a command and control "operational backbone" to which nations could contribute missile defense interceptors and sensors in the future.

Alliance territory and populations is technically feasible.

In parallel with these efforts at NATO, the United States carried out a series of detailed technical and architectural assessments examining options to provide protection for Europe and the United States from longer range ballistic missiles launched from the Middle East. The analysis concluded that the optimal location for defending Europe against limited intermediate- and long-range missile strikes from the Middle East, *and* for providing additional capability to the current missile defense system located in Alaska and California to defend the United States, is Central Europe. After consultations with interested NATO allies, the United States began formal discussions in January 2007 on basing defenses in Europe.

as ballistic missile threats have evolved in terms of range, technical sophistication, and payload, allies have started to examine longer range missile defenses

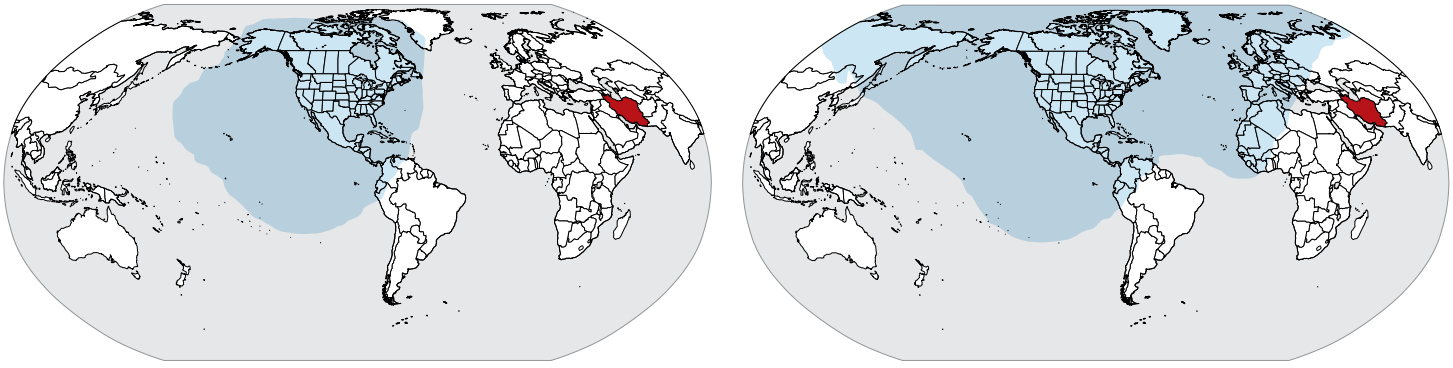
As important as this work was, it remained limited in scope because it did not examine options for protecting Alliance *territory and population centers* from longer range threats. In recognition of the growing risk from missiles, the November 2002 Prague Summit Declaration by NATO Heads of State and Government stated, "Today we initiated a new NATO Missile Defense Feasibility study to examine options for protecting Alliance territory, forces and population centers against the full range of missile threats, which we will continue to assess." This follow-on feasibility study of the architectural options to defend NATO forces, populations, and territory from ballistic missiles of all ranges was completed in July 2005. At the November 2006 Riga Summit, heads of state and government acknowledged the study's findings that missile defense for

The current American proposal calls for an interceptor site of up to 10 GBIs in Poland similar to those deployed in Alaska and California. The GBIs would be housed in underground silos in an area about the size of a soccer field. These interceptors, like those based in the United States, employ small non-explosive hit-to-kill vehicles to destroy incoming warheads. The interceptors would be supported by a fixed X-band radar in the Czech Republic. They would track and discriminate ballistic missiles in the midcourse portion of their flight. The radar's location would be optimized to point its narrow beam toward the Middle East to detect missiles in flight from that region. The data collected would be used to guide the GBIs to the projected trajectory of the missile warhead. These new missile defense assets would be integrated with existing radars in Fylingdales in the United Kingdom and Thule in Greenland, as well as with the missile defense interceptors located in California and Alaska. Construction of the missile defense sites could begin as early as 2009, with the first interceptors emplaced in 2011–2012.

The proposed plan offers a way that the United States and its NATO allies can not only cooperate on missile defense, but also maintain the *collective security* of the Alliance by creating a defense that would protect all NATO countries facing a long-range ballistic missile threat from the Middle East. Some Alliance members in southeastern Europe would not face these long-range threats given their proximity to the region. Rather, they are more likely to be threatened by shorter range ballistic missiles. For these countries, short- and medium-range missile defense systems would provide the desired protection. Toward this end, individual NATO nations are already pursuing shorter range missile defense systems, and the Alliance, as described above, is developing the ALTBMD program to link them into an integrated command and control network.

At the April 2008 NATO summit, heads of government took a major step in moving the Alliance toward a policy on continental defense. They cited a growing threat to Alliance territory and populations arising from proliferation and the "substantial contribution to the protection of allies from long range ballistic missiles to be provided by the planned deployment of European based United States missile defense assets" in Central Europe. NATO leaders also stated the importance of exploring ways to link the U.S. long-range missile defense capability with current NATO short-range missile defense efforts through

Figure 3. Areas Protected by U.S. Ballistic Missile Defense System



Without European Interceptor and Radar Facilities | **With European Interceptor and Radar Facilities**

the development of options that NATO would consider at its 2009 summit.

In the framework NATO agreed to, the long-range missile defense assets proposed by the United States could provide a capability to the Alliance that would complement existing and planned NATO missile defense efforts. A long-range defense system in Europe would be interoperable with current Alliance short-range defenses as well as NATO's ALTBMD program. The command and control architecture for the U.S. long-range missile defense system is being designed to be compatible with ALTBMD and the NATO Air Command and Control System, which, when operational, will serve as a unified air command and control network enabling NATO members to seamlessly manage air operations and air defense over Alliance territory. Information on missile defense operations, including data from the U.S. ballistic missile defense system, would be a part of this shared situational awareness. As missile defense systems, operators, and commanders from NATO nations are able to effectively coordinate efforts, they should be better positioned to deploy assets efficiently, ensure vital areas are defended, and avoid redundant resource expenditures.

Cooperation on missile defense along this path could lead to significant efficiencies and cost savings, with the United States focusing on long-range defense while NATO systems address shorter range threats to allies in southeastern Europe. This approach combines allied national missile defense contributions with possible NATO assets similar to the way the Alliance has fielded capabilities in the past. Such an arrangement would also provide another avenue for burdensharing in Europe with hosting nations providing a significant contribution to the collective defense of the Alliance. U.S. and European combined efforts in short- and long-range defense would keep U.S. and NATO security indivisible by providing all members with a defense against the full range of ballistic missile threats. With the protection provided by U.S. and allied capabilities in Europe, NATO member states would have an answer should a future hostile state attempt to use WMD-armed ballistic missiles to intimidate or coerce the Alliance regarding actions in defense of its interests.

Consultations with Russia

Since the January 2007 announcement of U.S. plans to field defenses in Europe to counter limited attacks from potentially hostile states such as Iran, Russia has expressed strong objections. Officials claim the system could nullify Moscow's strategic nuclear arsenal. The United States has been transparent with Russia regarding its plans and capabilities for the long-range missile defense system in Europe and has encouraged the Kremlin's cooperation against common dangers arising from missiles and WMD in the Middle East and elsewhere. Senior U.S. officials have conducted frequent consultations with their Russian counterparts, as well as Russian experts, on the proposed U.S. defense system.

the long-range missile defense assets proposed by the United States could complement existing and planned NATO missile defense efforts

American officials have explained in detail that the proposed missile defense system for Europe would pose no threat to Moscow's ICBM force launched from Russia at the United States. Nor would it have any capability against the Russian seabased strategic force of submarine-launched ballistic missiles. Given their proposed location, U.S. long-range interceptors based in Europe could not catch up to Russian missiles in flight. The defensive interceptors would be in a "tail chase." Although a moot point because of the preceding fact, it is evident that 10 interceptors would not be able to threaten Russia's strategic rocket force of hundreds of missiles and thousands of warheads. Nor can these systems be used as offensive ballistic missiles or converted to carry warheads. To do so would require significant modifications and testing, all of which would be impossible to undertake clandestinely.

To address Russian concerns, the United States has offered an array of measures to increase transparency in its missile defense activities, including those proposed for Europe. These range from visits to missile defense sites and opportunities to observe related tests to the sharing of information on U.S. missile defense plans and programs. The United States has also been willing to explore cooperation with Russia across the full spectrum of missile defense activities. In 2007, it provided Russia with a comprehensive list of possible cooperative missile defense measures. For example, the United States proposed to develop a joint regional missile defense architecture that could incorporate both U.S. and Russian missile defense assets. This concept could involve any number of linked missile defense assets or systems, all working toward the goal of defending the United States, Europe, and Russia from the shared threat of ballistic missile attack. To date, Moscow has not directly engaged on these cooperative proposals. Instead, it insists that Washington and its allies must suspend plans to deploy long-range missile defenses in Europe. In exchange, Russia has stated that it would be willing to jointly monitor Iranian missile activity and share any relevant data from its early warning radar systems. Despite these differences, the United States is continuing to explore opportunities for cooperation with Russia, both bilaterally and within NATO.

The long lead time involved in building and deploying missile defenses, combined with the growing dangers of nuclear and missile threats, suggests the need for the United States and its NATO allies to address, in a timely and comprehensive manner, how best to move forward with the proposals before them. As they do, several areas merit further attention. The Alliance should:

- sharpen its focus on the strategic implications of a shift to defending its populations and territory against ballistic missile attacks
- broaden its understanding of the ways in which missile defense can complement other measures to combat and roll back WMD and missile proliferation
- expand intelligence-sharing on the extent and timing of WMD and ballistic missile threats to European allies so they may better assess the implications of such threats for stability and the protection of European interests
- develop a roadmap for the incremental fielding of defenses that integrates shorter and longer range systems from those nations with the capacity to make contributions. This should include identifying arrangements for the command and control of such defenses in a way that optimizes the effectiveness of the system and is transparent to all allies.

Together, these efforts would lead to a better understanding of the contribution missile defense can make to strengthening the Atlantic Alliance as it adapts to the security environment of the 21st century. **JFQ**

Preparedness for a CBRNE Event

U.S. Air Force (Mark Wyatt)

By ZYGMUNT F. DEMBEK

Airman tests biological agents for Full Spectrum Threat Response program

U.S. Air Force (Michael A. Ward)

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Former Secretary of the Navy Richard Danzig postulates the potential catastrophic effects of bioterrorism on our nation from "reload."[1] Simply put, *reload* is the ability of an enemy to repeatedly conduct bioterrorism attacks. This aspect of bioterrorism could have devastating effects. Are our military health care providers and first responders prepared for such a chemical, biological, radiological, nuclear, or high-yield explosive (CBRNE) attack? The precise answer to this question is as likely to appear through gazing at a Magic 8-Ball as from any particular source and will not be fully known until such an event occurs. However, some indicators are available to help predict the outcome of a CBRNE attack on our homeland and how the military can participate in a national response. To conduct a realistic assessment of national CBRNE preparedness, it is useful to examine:

- historical accounts of national readiness
- changes that have occurred since 9/11 among the various components of civilian and military health care providers as well as capacity
- educational measures needed to prepare for CBRNE events
- critical role of leadership in emergency response.

Historical Readiness

The level of preparedness that existed during World War II is representative of full national preparedness. This was achieved with

Colonel Zygmunt F. Dembek, USAR, is Chief of Education and Training in the Operational Medicine Department, Division of Medicine, at the U.S. Army Medical Research Institute of Infectious Diseases.

Left: Civilian first responders assist in All Hazard Response Training at Hanscom Air Force Base

total military mobilization and full civilian preparedness. The Office of Civilian Defense (OCD), established in May 1941, was charged with protecting the civilian population, maintaining morale, and promoting volunteer involvement in defense. It was also responsible for ensuring that Federal agencies responded to community needs resulting from the war. OCD established air-raid procedures, created the Civil Air Patrol, supervised blackouts, filled sandbags, provided for war service functions such as childcare, health, housing, and transportation, and planned for protection against fire in case of attack. Although OCD was disbanded at the conclusion of the war, the Federal Civil Defense Administration (FCDA) was established in 1950, partially in response to the Soviet Union's development of the atomic bomb. The FCDA was wholly a civilian organization, as civilian protection was understood as ideally a civilian rather than a military undertaking.

During the Cold War, a heightened degree of national readiness was maintained by the FCDA. The civil defense system was developed in response to the threat of nuclear war, perceived to be the primary CBRNE threat. There was a boom in construction of fallout shelters in certain parts of the Nation. A mid-1960s study of three Midwestern states showed that their civil defense directors estimated war as more likely than did their community leader counterparts and had a more positive view of civil defense in general. The most successful civil defense directors came from larger cities. Importantly, these directors felt that individuals could do more to control national problems. Civilian and military officials devised plans that would give the greatest number of civilians a chance to survive a nuclear war and reconstitute society. This historical perspective has been lost to modern American culture.

A similar state of national readiness for a CBRNE threat today is maintained by modern-day Israel, which can be thought of as a "hardened" democratic society. As a nation, Israel has adapted to the threat of biological or chemical attack, especially since its experiences during the 1991 Persian Gulf War. Its government funding supports civil defense against unconventional weapons. Israel's civil defense policy is based on two components: to deter or prevent an enemy attack and to minimize the damage of such an attack should deterrence and prevention fail. Israeli civil defense is an inseparable part of national defense, and the military is fully integrated in this process through the Israel Defense Forces Home Front Command, created in 1992. Many North Atlantic Treaty Organization allies similarly include civilian and military components in their civil defense planning.

In general, the United States follows a CBRNE defense doctrine similar to Israel's. Total protection is impossible, and attempts to achieve it would require social and economic changes that a populace would find unacceptable. Deterrence of an unconventional weapon attack is important to maintain. Those who would use such weapons must understand that they would suffer retaliation—a conviction that is also held by our allies.[2] When combined with active measures, the Israeli CBRNE defense experience dictates that deterrence helps to reduce the expense of passive protective measures. Fully functional early warning systems should significantly improve civil defense and are an important component of national CBRNE readiness.

Ohio National Guardsmen extract victims during exercise Vigilant Guard, 2007

U.S. Army (Russell Lee Klika)

Where Are We Today?

The independent health advocacy group Trust for America's Health (TFAH) conducts an annual national survey of state public health systems regarding preparedness for a CBRNE disaster. The news from 5 consecutive years of analysis is heartening. The TFAH assessment is thorough and based on 10 pragmatic preparedness indicators, including the ability to receive and distribute pharmaceutical supplies, laboratory diagnostic capacity, various workforce surge capacity indicators, immunization delivery, resiliency, and measures of leadership commitment to achieving these goals. When the assessment was first conducted in 2003, approximately 75 percent of the states earned 5 or fewer of the 10 indicators; in the 2007 survey, the same percentage of the states scored 8 or higher. Success in these measures requires coordination among Federal, state, and local authorities, the ability to "grow" a professional and reliable public health workforce, secure and reliable data transmission, access to qualified volunteer personnel, and the willingness of state and local authorities to spend funds to match and exceed Federal grants for these measures.

we must prepare our health care providers fully and harden our health care infrastructure

This increase in national civilian preparedness is due to Department of Health and Human Services dispersal of billions of dollars to the states through the Centers for Disease Control and Prevention, the Health Resources and Services Administration, and the American Schools of Public Health. This massive funding effort, coupled with the establishment of national Public Health Preparedness Centers, has had a significant impact on our civilian level of preparedness for a CBRNE event, as reflected in the most recent TFAH analysis.

A hypothetical scale of CBRNE preparedness might equate a low level of societal post–World War II national preparedness to that existing prior to September 11, 2001, and a high preparedness level to that of modern-day Israel. Where is the United States today between these two levels of preparedness? As previously described, multiple efforts have been established since 9/11, although we have not achieved parity with Israel. As a nation, we have not moved toward our World War II mobilization level. There has not been a military draft in support of ongoing operations. The average citizen is little inconvenienced in his or her daily life by the wars in Iraq and Afghanistan. No national societal commitment has occurred for the maximum possible CBRNE preparedness.

If we are concerned about the national level of preparedness, we must prepare our health care providers fully and harden our health care infrastructure. Most preparedness benchmarks for the military health care sector would of necessity be similar to those used to assess the civilian sector by the TFAH, including pharmaceutical and immunization distribution capacity, laboratory diagnostic capacity, workforce surge capacity, resiliency, and leadership commitment to achieving these goals. There are also important exceptions that would need to be considered to assess the readiness status of military health care providers. These include the fact that those on the frontlines of a battlefield may be more at risk of receiving patients exposed to CBRNE or of becoming exposed themselves. Also, those at the forward echelons of military health care may have less hospital capacity immediately available than their civilian counterparts. There are also many benefits associated with the existing military health care system. They can be thought of as communication enhancers, superior preparedness education, organic material, and personnel assets.

Since 9/11, redundant communication capability has been developed, stretching across the echelons of health care. This is particularly important in the event that any single or multiple communication modes are affected during a CBRNE event. The Electronic Surveillance System for the Early Notification of Community-based Epidemics (ESSENCE) is now available across the various echelons of military health care. This system records disease presentation by syndrome at the time of patient visit, greatly decreasing the time to determine the occurrence of a disease outbreak. Similar disease surveillance systems have been developed in the civilian sector nationally[3] and by individual cities and states.[4] There are also efforts linking military and civilian disease reporting systems to maximize national outbreak detection and tracking.[5] In addition, the nationally established BioWatch Program uses a series of detectors to provide early warning of a mass biological pathogen release. This system alerts authorities before victims begin to show symptoms and enables early medical treatment, thereby decreasing illness and death.[6]

Military Organizations

Many military units have state-of-the-art CBRNE agent detection capabilities, both in the field and through reachback to the military reference laboratories at the U.S. Army Medical Research Institute for Infectious Diseases (USAMRIID), U.S. Army Medical Research Institute of Chemical Defense (USAMRICD), and the Armed Forces Radiobiology Research Institute (AFRRI). Military health care providers have access to experimental diagnostics, detection systems, and therapies within the proper chain of command. There are unique resources available to diagnose and treat high-risk patients, including the USAMRIID Aeromedical Isolation Team and Special Medical Augmentation Response Team (SMART), which are organic to the U.S. Army Medical Command. Field investigation capabilities are available through various teams. Full integration of other important partners in any CBRNE defense, including diagnostic laboratories, veterinarian assessment, mortuary support, and other capabilities, exists through the chain of command.

The Navy and Marine Corps Chemical Biological Incident Response Force (CBIRF) can deploy up to 330 personnel to coordinate initial relief efforts and assist with security, agent detection and identification, medical expertise, and limited decontamination of personnel and equipment. CBIRF is a national asset that can be deployed in support of homeland defense and has been used numerous times since its inception in April 1996.

National Guard and Active Component forces have become more integrated in military operations since 9/11. Many state emergency operations centers are collocated with their National Guard components. The National Guard responds to statewide disasters and has special capabilities in the formation of Weapons of Mass Destruction Civil Support Teams in CBRNE events. Another asset available to a state's National Guard is the CBRNE Enhanced Response Force Package. These newly developed teams are designed to provide capabilities to locate and extract victims from a contaminated environment, conduct casualty/patient decontamina-

tion, and provide lifesaving medical triage. Statewide emergency preparedness efforts from notional to full-scale preparedness drills are often coordinated with that state's National Guard assets.

Although not considered a branch of the Armed Forces, the U.S. Public Health Service (USPHS) is part of the national health care emergency response network. Since 9/11, the USPHS has increased its emergency response capacity. The Office of the Surgeon General can dispatch multidisciplinary teams of physicians, dentists, veterinarians, nurses, pharmacists, and scientists to respond to domestic and international humanitarian missions. USPHS officers also may be assigned to work with or in state health agencies, enabling integration into a local response to a CBRNE event.

U.S. Northern Command. Following 9/11, the Unified Command Plan 2002 established a new geographic combatant command, U.S. Northern Command (USNORTHCOM), with inherent responsibilities for handling national disasters inside the United States because it is tasked to carry out the military's homeland security activities. Among the many USNORTHCOM assets is the Joint Task Force–Civil Support (JTF–CS), which plans and integrates Department of Defense (DOD) support to the designated lead agency for domestic CBRNE consequence management operations. JTF–CS can deploy to a CBRNE incident site and execute command and control of designated DOD forces, providing support to civil authorities to save lives, prevent injury, and give temporary critical life support. JTF–CS focuses on responding to the effects of a CBRNE incident after civilian resources have been utilized, and typical JTF–CS tasks include incident site support, casualty medical assistance and treatment, displaced populace support, mortuary affairs support, logistics support, and air operations.

U.S. Army North (Fifth Army). This organization conducts homeland defense and civil support operations and theater security cooperation activities as the Army Service component command to USNORTHCOM. Previously, the United States was divided between Fifth Army in the West and First Army in the East. Recent transformation has retained responsibility of training, readiness, and mobilization missions with First Army, while Fifth Army is assigned to USNORTHCOM as U.S. Army North (USARNORTH), which commands and controls deployed forces as a JTF or joint force land component command. The CBRNE Consequence Management Reaction Force is a reaction JTF composed of joint military and governmental organizations from across the country tasked to respond to a terrorist attack or natural disaster resulting from or causing a release of chemical, biological, radiological, or nuclear agents, or a high-yield explosive. USARNORTH also can provide operational command posts to serve as the command and control element for a potential JTF. Each post includes approximately 66 personnel equipped with command and control capabilities optimized for the support of civil authorities.

there are efforts linking military and civilian disease reporting systems to maximize national outbreak detection and tracking

Educational Measures

Various graduate medical educational opportunities are available to military providers and scientists through USAMRIID, USAMRICD, and AFRRI, including such courses as the Medical Management of Chemical and Biological Casualties, Field Management of Chemical and Biological Casualties, Hospital Management of CBRNE Casualties, Medical Effects of Ionizing Radiation, and other Service-specific courses. These postgraduate courses train to a high standard to develop an "informed physician/clinician/public health workforce" that will recognize, triage, and treat CBRNE patients and facilitate crisis response and recovery. These courses use subject matter experts in a resident research setting, affording participants access to world-class research expertise combined with realistic experiential case studies. Training at these centers is regularly updated to reflect changes in patient treatment policies, understanding of disease, and the most recent prophylaxis and therapies. There are also courses required for the military first responder community, such as those taught at the U.S. Army CBRN School.

Role of Leadership

Leadership contributes significantly to any disaster response and recovery. Emergency response personnel nationwide are intimately familiar with the incident

National Guard Bureau

National Guardsmen respond to simulated CBRNE attack

command system (ICS), which permits an effective integrated response to a disaster such as a fire or weather-related emergency. ICS training and structure enables disparate emergency response organizations (for example, fire, police, emergency medical services) to respond to an event using a common management system with coordinated communication, response, and synchronization along shared apparent lines of authority. This system should work well in the event of a CBRNE event as long as organizations possessing the requisite specialty skills are included in the ICS disaster response. However, such responses will always include visible authority figures to coordinate efforts among various organizations, as well as between the civilian and military sectors.

Military leadership in a catastrophic emergency is not assumed to be preferable to civilian rule. However, that view may be changing. An example was the substitution of military leadership for failed civilian efforts in New Orleans during the Hurricane Katrina recovery. Lieutenant General Russel Honoré, USA, helped to restore calm and order to New Orleans in the hurricane's aftermath as the enormity of the disaster and its required response became fully understood.

National Guardsman tests communications system networked through incident command system initiative

U.S. Air Force (J.G. Buzanowski)

Civil service management differs in several ways from military leadership. The concept of civil service began in China during the Qin (221–207 BCE) and Han dynasties (206 BCE–220 AD) and initially relied on recommendations by superiors for appointment to office. In administrative areas, especially the military, appointments were to be based solely on merit. After the fall of the Han dynasty, the bureaucracy regressed into a semi–merit-based nine-rank system in which noble birthright became the most significant prerequisite to more authoritative posts.

There is a rich history of attempts to promote competency and prevent improper political influence in the U.S. civil service. During the 19th century, the U.S. Federal civil service was largely a spoils system. After President James Garfield was assassinated by a dissatisfied civil service job seeker in 1881, the Pendleton Act of 1883, sponsored and written by opponents of the patronage system, reestablished the Civil Service Commission. This eventually led to rules governing competitive examinations for classified civil service positions. The Pendleton Act placed most Federal employees on the merit system and marked the end of the spoils system. Among the many changes to civil service since then have been the creations of the General Services Administration and the Civil Service Reform Act of 1978, which abolished the U.S. Civil Service Commission and created the U.S. Office of Personnel Management, Federal Labor Relations Authority, and U.S. Merit Systems Protection Board in an effort to replace incompetent officials.

The U.S. military is a meritocracy (that is, those in positions of high authority have the credentials, experience, and demonstrated leadership, all developed over decades). The highest command positions are (like promotions) selected by boards of superiors and peers. Successful leadership and innovation are rewarded. Continuing professional education is valued, encouraged, and often required.

Unfortunately, it is possible for some top civil service managers to arrive at their positions lacking vital skills and experiences. Such qualifying life experiences are not easily avoided in our Active duty military system. This system requires regular movement to assignments of increasing complexity, and one's management skills increase as a consequence of progressively more responsible positions over a 20- to 30-year career. Retired Major General John Singlaub, USA, in his autobiography *Hazardous Duty*, observed that military officers (conducting special operations) must maintain a high level of personal honesty. Singlaub described how an "officer had to have two fundamentally important traits . . . integrity and courage, both physical and moral. If an officer lacked those qualities, no amount of careful planning or help from influential connections would bring him a successful career." Regrettably, the same cannot be said for all civilian appointees.

In the event of a national emergency, specifically a chemical, biological, radiological, nuclear, or high-yield explosive event, our military can provide multiple assets and specialized expertise to support the national health care response. The existing military structure and health care providers have been considerably transformed since 9/11 for national preparedness. Given the current operations tempo, our nation is perhaps better prepared for such an event than at any time in its recent past. Contemporary focused resources, and training to prepare for a catastrophic CBRNE event, will continue to produce a national reserve of highly trained, capable personnel. **JFQ**

NOTES

[1] See Richard Danzig, *Catastrophic Bioterrorism—What Is to Be Done?* (Washington, DC: Center for Technology and National Security Policy, National Defense University, August 2003), available at <http://biotech.law.lsu.edu/blaw/general/danzig01.pdf>.

[2] "France 'would use nuclear arms,'" BBC News, January 19, 2006, available at <http://news.bbc.co.uk/2/hi/europe/4627862.stm>.

[3] General information on BioSense is available at <www.cdc.gov/BioSense/>.

[4] For example, see the International Society for Disease Surveillance Web site, available at <www.syndromic.org/>.

[5] Peter Buxbaum, "Military Health System, CDC, join to track disease outbreaks," *Government Health IT*, March 6, 2008, available at <www.govhealthit.com/online/news/350251-1.html>.

[6] Dana A. Shea and Sarah A. Lister, *The BioWatch Program: Detection of Bioterrorism*, Congressional Research Service Report RL32152, November 19, 2003, available at <http://fas.org/sgp/crs/terror/RL32152.html>.

Airmen construct In-place Patient Decontamination Capability

U.S. Army (Phillip H. Jones)

Decontamination Operations in a Mass Casualty Scenario

At 10 a.m. on May 10, 2007, in the northeast corner of metropolitan Indianapolis, near the suburb of Lawrence, a terrorist group smuggled in and detonated a nuclear device. The local, state, and Federal governments were presented with many complex challenges as a result of this catastrophic event. Among the most challenging tasks was the need to quickly and completely decontaminate large numbers of the population. . . .

By MICHAEL L. SNYDER *and* THOMAS J. SOBIESKI

Thus begins the scenario for exercise Ardent Sentry 2007 (AS07). Why was such an exercise needed? Indeed, the Department of Defense (DOD) is capable of providing decontamination in support of civil authorities. However, effective employment of DOD decontamination capabilities requires a full understanding of the special circumstances of a homeland event and the doctrinal differences between battlefield decontamination operations and defense support to civil authorities (DSCA).

This article, sponsored by the Joint Requirements Office for Chemical, Biological, Radiological, and Nuclear Defense (JRO CBRND), focuses on two perspectives of the DOD decontamination mission for planning considerations: the differences between decontamination conducted in a DSCA environment and that done by DOD units in their traditional wartime role. The article also examines additional considerations on mass decontamination tasks due to the DSCA environment; the challenges associated with decontamination in a DSCA environment; the impact of DSCA on decontamination tasks; and some specific observations about managing the civilian population, controlling runoff, and dealing with personal effects. It further highlights the need for better understanding by DOD planners and units regarding the unique challenges of supporting civilian authorities with decontamination.

Background

Exercise Ardent Sentry 2007 was designated by the Chairman of the Joint Chiefs of Staff, sponsored by U.S. Northern Command (USNORTHCOM), and supported by U.S. Joint Forces Command. Based on Department of Homeland Security (DHS) National Planning Scenario #1 (Nuclear Detonation—10-Kiloton Improvised Nuclear Device),

Michael L. Snyder is a Homeland Security Advisor with Battelle Memorial Institute. Thomas J. Sobieski provides Contract Support (Battelle Memorial Institute) to the Joint Staff, Force Structure, Resources, and Assessment (J8), Joint Requirements Office for Chemical, Biological, Radiological, and Nuclear Defense.

AS07 primarily focused on exercising the USNORTHCOM ability to execute DOD chemical, biological, radiological, nuclear, and high-yield explosive (CBRNE) response plans at the operational level. For the first time, AS07 included a separate but simultaneous field training exercise designed to allow selected DOD units to train with civilian counterparts.

Since 2004, the JRO CBRND has been providing CBRN and consequence management subject matter experts to support the combatant commands' and their subordinates' training and exercise programs. The office has also partnered with several non-DOD government agencies to enhance their knowledge of DSCA procedures.

In the months leading up to AS07, the JRO CBRND provided USNORTHCOM and USJFCOM with technical assistance in developing the effects of the nuclear detonation for the exercise and observed battle staff operating procedures at selected command and control locations. Exercise development included collaborating with exercise planners from the Indiana Department of Homeland Security to build the documents and scenario inputs needed to drive the DOD response to the Federal requests for assistance. Participants recognized during the planning process and exercise execution that further discussion of the above two perspectives of DOD decontamination would benefit the CBRNE response community and emergency responders in general.

The exercise was conducted May 10–17, 2007. The simulated nuclear detonation was a no-notice terrorist event in the northeast corner of metropolitan Indianapolis. The scenario used scripted weather, census data from 2000, and computer modeling. It was determined that the 10-kiloton surface burst created casualties estimated at 15,000 dead and 21,000 injured. The injured included those affected by the blast, thermal radiation, prompt radiation, and subsequent radioactive fallout.

The detonation and subsequent effects resulted in the declaration of an incident of national significance, the appointment of a principal Federal official by DHS, and a subsequent Presidential disaster declaration. Per the National Response Plan (NRP), which was in effect at the time of the exercise but has since been replaced by the National Response Framework, DHS and Federal Emergency Management Agency (FEMA) Region V established a joint field office (JFO) at Camp Atterbury, 43 miles south of Indianapolis. The defense coordinating officer and defense coordinating element from FEMA Region V joined the JFO as part of the coordinating staff. Joint Task Force–Civil Support was deployed to Camp Atterbury to provide command and control over all DOD forces deployed (real world and notionally) to support the local, state, and Federal response. Elements of the DOD CBRNE Consequence Management Response Force were also deployed to conduct operations in concert with first responders from Marion County, Indiana, the Indiana Department of Homeland Security, elements from the Indiana National Guard CBRNE Enhanced Response Force Package, and civil support teams. This field training exercise was conducted at the Muscatatuck Urban Training Center, 25 miles southeast of Camp Atterbury.

the simulated nuclear detonation was a no-notice terrorist event in the northeast corner of metropolitan Indianapolis

Decontamination in DSCA Environments

In a terrorist use of weapons of mass destruction (WMD) scenario, DOD is ready to assist the local, state, and Federal response efforts. DOD fulfills its DSCA mission by responding to requests for Federal assistance in accordance with the NRP and DOD policy and guidance. The NRP provides the coordinating framework for support under the Robert T. Stafford Disaster Relief and Emergency Assistance Act[1] and the Economy Act.[2] Within the NRP, DOD is a support agency to all 15 emergency support functions and a cooperating agency to the majority of NRP support and incident annexes. Pursuant to the above, when requested and in concert with other Federal agencies, DOD supports the primary agency by providing the manpower and equipment necessary to meet the needs of the responding local and state officials.[3]

In a large-scale catastrophic event, where local, state, and regional capabilities are overwhelmed, the Federal Government, with DHS as the lead agency, assists local and state efforts in mitigating effects. To accomplish this, DHS may request support from Title 10 DOD forces, activated Reserves, and possibly federalized National Guard. Orchestrating DOD capabilities in collaboration with other existing capabilities is the function of the JFO.

In the AS07 scenario, DOD decontamination capabilities were used (notionally) either to augment or provide relief in place for decontamination operations initially started by local first responders and National Guard units in state Active duty or Title 32 status. This highlights the need for DOD decontamination units to learn and understand how civilian first responders approach expedient mass decontamination operations.

The pre-9/11 focus on responding to and remediating hazardous material spills demonstrated a capable and thorough decontamination process. These procedures and systems, however, were equipment- and manpower-intensive and had various but limited throughput capacities (usually 50–100 people per hour). By comparison, the current decontamination throughput capabilities of DOD units, such as the Marine Corps Chemical/Biological Incident Response Force and Army Chemical Decontamination units, vary between 250 and 400 troops per hour.[4]

Recognizing the need to decontaminate much greater numbers, civilian first responders developed methods using currently available equipment. Two of the more common approaches are the Emergency Decontamination Corridor System (EDCS) and Ladder Pipe Decontamination System (LDS). Both have been documented in publications by the U.S. Army Soldier and Biological Chemical Command[5] (SBCCOM) and the Chemical, Biological, Radiological, and Nuclear Defense Information Analysis Center (CBRNIAC).

In January 2007, SBCCOM published *Guidelines for Mass Casualty Decontamination during a Terrorist Chemical Agent Incident*. Although the guidelines review these capabilities in respect to a chemical event, they offer several principles of decontamination that also apply to a nuclear detonation scenario:

- expect a 5:1 ratio of unaffected to affected casualties
- decontaminate as soon as possible
- disrobing is decontamination: top to bottom, more is better
- water flushing generally is the best mass decontamination method
- after known exposure to a liquid agent, first responders must self-decontaminate as soon as possible to avoid serious effects.

Drawing on the innovation of various fire departments, section 4.4 of the SBCCOM guideline also provides excellent schematics, photographs, and procedures for mass decontamination via the EDCS and LDS and commonly used first responder equipment.

Similarly, CBRNIAC cites two products: the *Emergency Decontamination Corridor and Ladder Pipe Decontamination Systems* (CR–04–12), published in May 2004, and *Best Practices and Guidelines for Mass Personnel Decontamination* (SOAR–04–11), published in June 2003. CR–04–12 is a laminated card that provides site layout diagrams for each system and quick reminders on the advantages and disadvantages of each.

Similar to the SBCCOM publication, SOAR 03–10 focuses on responding to and decontaminating victims due to chemical or biological incidents. Its sections on general decontamination principles, setups, and managing incident sites are useful for a nuclear scenario as well. These systems primarily use equipment common to fire departments (including those at DOD installations), but not to DOD decontamination units.

This disparity in capability within DOD is to be expected as installation fire department personnel are trained and equipped much like their civilian counterparts and routinely collaborate with them through mutual assistance/aid compacts (as directed through DOD instructions/guidelines). DOD decontamination units, on the other hand, are equipped and trained for the warfighting mission. These facts highlight the need for all elements of the possible DOD response community to become familiar with the equipment and procedures of civilian expedient mass decontamination to fulfill their expected supporting roles according to the NRP.

Impact of DSCA

While developing the scenario in conjunction with representatives from the Indiana Department of Homeland Security Training Division and City of Indianapolis Department of Public Safety, it was learned that decontamination efforts in the DSCA environment require special considerations by military CBRN planners in the following areas:

- determining who needs to be decontaminated
- multisite operations
- integration of decontamination operations with other plans
- disposition of runoff
- disposition of personal effects
- accountability
- crowd control.

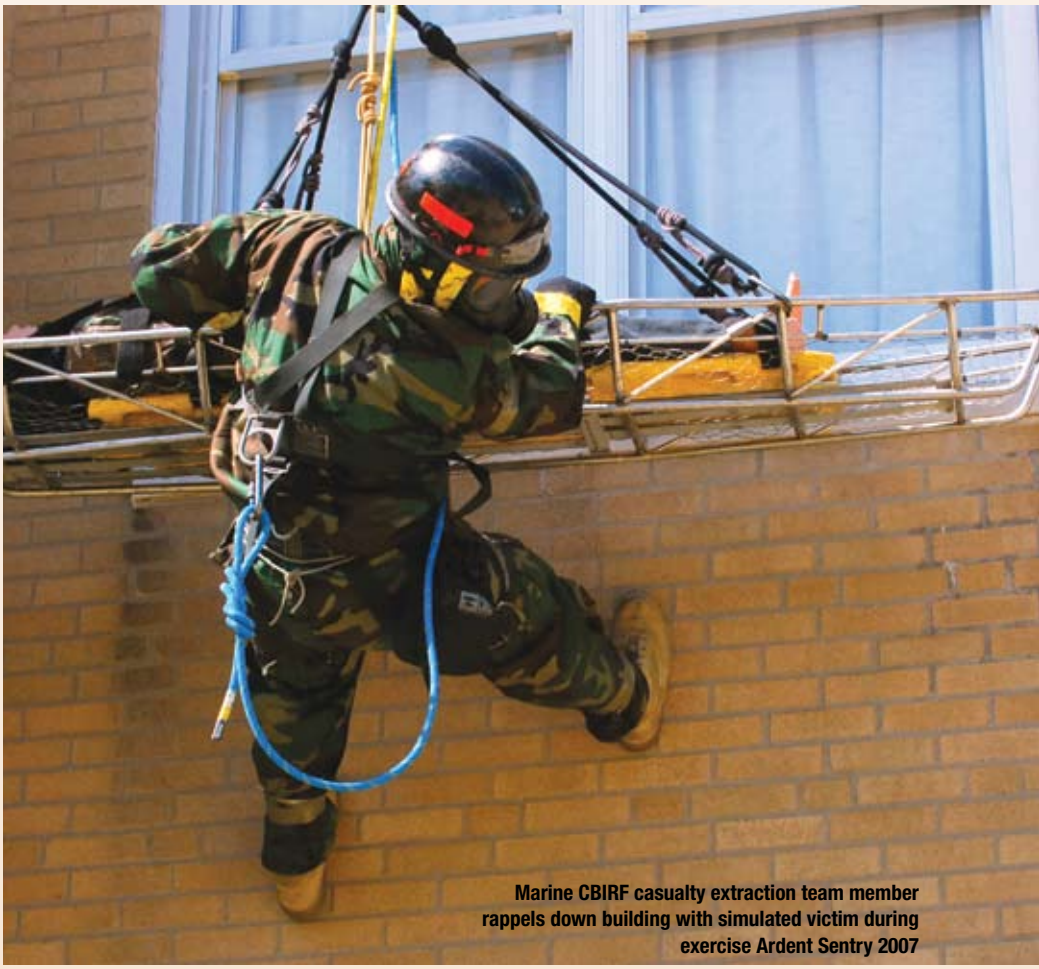
The CBRNE expert needs to be keenly aware of the full context in which DOD decontamination capabilities will be employed in a DSCA environment. Incorporating the above considerations into the staff preplanning and command guidelines will strengthen the execution of mass decontamination operations.

Other information sources of best practices to amplify and support these considerations include the DHS Lessons Learned Information Sharing Web site (www.LLIS.gov), which contains an archive of best practices from all jurisdictions of interest to the response community at large. One such citation, "Radiological Dispersal Device Incident Response Planning: Decontamination," provides insights into the topical discussions presented here.

Determining Decontamination. In the AS07 scenario, modeling estimated that a total of 21,000 citizens were within the area defined as the evacuation zone due to the fallout created by the nuclear detonation. Some of these citizens would be evacuated immediately, while those further downwind might shelter in place and be evacuated later.

current decontamination throughput capabilities of DOD units vary between 250 and 400 troops per hour

It is reasonable to assume that not everyone within the evacuation zone would be contaminated. Identifying those who are "clean" would greatly reduce the resources needed and expended. This prescreening process is likely to be complicated by several factors in a no-notice event. For example, many victims or potential victims would have self-evacuated, creating the issue of how to communicate to them, locate them, treat them, and deal with any cross



U.S. Air Force (Julius Delos Reyes)

Marine CBIRF casualty extraction team member rappels down building with simulated victim during exercise Ardent Sentry 2007

▲ *Download as computer wallpaper at ndupress.ndu.edu*

contamination precipitated by their evacuation. Additionally, first responders, some of whom would be victims themselves or become victims due to exposure, would arrive late and be uncoordinated due to communications being degraded by electromagnetic pulse and system overloading.

Multisite Operations. To respond to the magnitude of need, several mass decontamination sites probably would be established around the plume perimeter. While DOD is not the primary agency responsible for coordinating the operations of the multiple sites, having military leaders prepared to provide support and/or relief to any operation or even take over full operation of a particular site would improve and maintain the efficiency of the process. Knowledge of the locations, access routes, and capabilities on each site would expedite the response to requests for support by civil authorities.

Integrating Operations. Decontamination operations must be integrated into the whole mitigation/recovery process. Successful decontamination operations include planning initial medical triage and follow-on medical care, as well as providing subsequent transport, clothing, food, and shelter to all those who process through prescreening.

From a medical standpoint, establishing ambulatory and nonambulatory decontamination lines is just one aspect of the process. Consideration needs to be given to how close to the decontamination area triage facilities and transportation staging areas should be established so wind shifts do not threaten operations. Provision of food and water needs to be planned for those awaiting transportation, as do trash collection and the consolidation and disposal of contaminated clothing and personal effects. Coordination with ESF 8 (Public Health and Medical Services) and the American Red Cross on pickup/transport is recommended in order to prevent overcrowding at the decontamination site.

Runoff. The need to process large numbers through the decontamination line makes containment of the runoff a challenge. Conventional hazardous material decontamination operations contain runoff to prevent contamination of the environment. Runoff issues revolve around the type of contaminant as well as remediation coordination with the proper environmental agencies. A hard surface with the proper grade to reduce cross contamination is essential to containing the runoff. EDCS and LDS operate as high volume/low pressure systems and generate significant amounts of runoff.

Proper location selection and configuration are crucial to enabling continuous decontamination operations, as well as to reducing the amount of postdecontamination remediation that needs to occur. In the DSCA environment, CBRNE staff officers must consider environmental impacts when planning and executing decontamination operations. Numerous Federal and state laws may impact the decisions of CBRNE planners. *First Responders' Liability to Mass Decontamination Runoff*, published by the Environmental Protection Agency in July 2000, provides an excellent synopsis of the issue and has links to more detailed information.[6]

Personal Effects. The need to decontaminate large numbers of people creates the need to deal with volumes of personal effects that will require final disposition as victims process through the decontamination line. Jurisdictional decisions referencing the disposition of personal effects will need to be addressed within JFO planning. What is to be done with licenses, credit cards, and other personal identity items will need to be determined as prescribed by local protocols. Additional protocols must be in place for the screening/disposition of vehicles.

Accountability. In every event, ascertaining the disposition of all affected people is a major concern. A nuclear detonation scenario of this magnitude would most certainly be a worst-case scenario, particularly due to the large numbers of displaced residents seeking decontamination. Complicating the need to track people through evacuation, decontamination, transport, and followup medical care is the fact that they may have also been stripped of any identification. In the initial chaos of a no-notice event, such protocols may not have been in place in the rush to meet other priorities. In any case, typical DOD decontamination procedures do not address this task but may be expected to support it in a DSCA response.

Crowd Control. Keeping large groups orderly is essential for effective mass decontamination operations. Local law enforcement would vector victims to the various mass decontamination sites established upwind of the blast and outside the projected plume path. Communicating to the victims the necessity to move through the decontamination processes in an efficient manner would be a challenge. While Title 10 forces are prevented from performing law enforcement duties in accordance with the Posse Comitatus Act, the planning and operation of a mass decontamination station must address the need for crowd control and coordination for support from civilian law enforcement.

The procedures and capabilities to conduct mass decontamination have undergone dramatic changes in recent years. Although the Department of Defense is not the lead agency responsible for coordinating the overall decontamination effort in a catastrophic scenario such as a nuclear detonation, it will most likely be called upon to establish its own mass decontamination sites or to augment operations that were previously established by local/state first responders.

This creates the need to understand the operational employment concepts and equipment that may be used by civilian first responders such as the Emergency Decontamination Corridor System and Ladder Pipe Decontamination System. Additionally, practicing the task of actually having to decontaminate thousands of people is not often done; therefore, periodic review of mass decontamination plans with special consideration of the aforementioned areas allows planners to incorporate new policies, procedures, and equipment. We train not just to train; we train because we are reminded that someday, we may have to execute this scenario for real. **JFQ**

NOTES

[1] Public Law 93–288, Title 42, U.S. Code, Section 5121, et seq.

[2] Title 31, U.S. Code, Section 1535.

[3] U.S. Northern Command Revised Contingency Plan 2501 for Defense Support of Civil Authorities, dated April 11, 2006, describes the manner in which DOD forces provide that support.

[4] Data gleaned from Chemical/Biological Incident Response Force organizational brief and statements made by CBRNE Consequence Management Response Force personnel at the commanders' conference hosted by Joint Task Force–Civil Support, Fort Monroe, Virginia, August 28–30, 2007.

[5] In 2003, the U.S. Army Soldier and Biological Chemical Command was renamed the Natick Soldier Research Development and Engineering Center under U.S. Army Research and Development Command.

[6] Available at <www.epa.gov/OEM/docs/chem/onepage.pdf>.

U.S. Africa Command and the **Principle of Active Security**

By **WILLIAM E. WARD** *and* **THOMAS P. GALVIN**

In 2000, the Zambezi River experienced significant flooding, and the nation of Mozambique was ill equipped to deal with the humanitarian disaster that followed. Homes were swept away, thousands of people were displaced, and 700 perished, leading to the deployment of a U.S. civilian disaster assistance response team and U.S. military forces to provide medical assistance and security to help Mozambique stabilize the situation. Although floods on the Zambezi have been routine, Mozambique had developed neither the infrastructure nor the response capabilities to handle such tragic events. Consequently, the episode caused tension between the government and the people. Left unresolved, this tension could have led to instability.

At Mozambique's request, the U.S. Government and international partners provided various programs over several years to bolster Mozambique's capabilities to mitigate and respond to the next major flood. Several American agencies got involved. The U.S. Agency for International Development established the Mozambique Integrated Information Network for Decision-Making, which enhanced the nation's ability to prevent human losses and economic disruptions from natural hazards. The project strengthened early warning systems for cyclones and flooding, improved disaster management and contingency planning, and expanded local early warning and response networks. It educated and involved communities in disaster preparedness and mitigation, training community volunteers in early warning reporting and educating children in schools. The Geological Survey was a major contributor.

On the Department of Defense (DOD) side, the U.S. Army Corps of Engineers helped Mozambique build the infrastructure to channel the waterways so the impact of flooding could be reduced. It also collaborated with Mozambique on a land management program to move people, as practicable, out of hazardous areas and provide them with suitable homes in safer locations. Separately during later years, other DOD activities served to enhance Mozambique's humanitarian assistance capacity. U.S. medical officers exercised in Mozambique under the Medical Civil Action Program (MEDCAP) to train their first responders, and the United States also helped build hospitals and clinics that could absorb the impact of the next disaster.

The Zambezi River flooded again in 2008. Although the deluge was even more severe than in 2000, Mozambique was better prepared. Boats and helicopters swiftly responded to evacuate 90,000 from affected areas. The death toll was reduced to about 30, far fewer than it could have been. The numbers affected by the flood were reduced from more than a million to about 115,000. Overall, Mozambique managed the disaster mostly by itself. The request for assistance from the United States was dramatically reduced due to Mozambique's capabilities. No U.S. military assets deployed.

Since the 2008 flood, the government of Mozambique has been working to become even better prepared as the Zambezi River will surely rise again. It is enlisting the support of various aid organizations to ensure quicker access to and distribution of food and relief supplies. It is encouraging displaced families to build their homes in safe areas instead of returning to low-lying areas near the river. Should these efforts succeed, the impacts of future floods will be reduced, as will any potential for instability or insecurity.

Nigerien soldiers participate in State Department's Trans-Sahara Counterterrorism Partnership training program

Fleet Combat Camera Group (Michael Larson)

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Addressing Real Needs

This vignette illustrates the ultimate purpose of U.S. Africa Command (USAFRICOM). In support of U.S. foreign policy and as part of a total U.S. Government effort, USAFRICOM's intent is to assist Africans in providing their own security and stability and helping prevent the conditions that could lead to future conflicts. The command will do this by employing the principle of *Active Security*, which governs who we are and what we plan to do. It is the basis for our theater strategy.

The types of activities described above fall within the spirit of *security assistance* as defined in DOD Publication 5105.38–M, *Security Assistance Management Manual*, dated October 2003. However, these activities did not all follow the strict definition of "programs, authorized by law, that allows the transfer of military articles and services to friendly foreign Governments."[1] While the assistance provided did "increase the ability of our friends to . . . help foster regional stability," much of the above involved the transfer of subject matter expertise and not necessarily the "transfer of articles or services."

Unfortunately, this has led to a cultural paradigm where security assistance and the management thereof are defined and resourced based on a very narrow definition of "program," which regards only the sales, grants, leases, or loans of goods or services that are essential to the security and economic well-being of allied governments. As a partner requests a particular good or service, a program is established or expanded. Program managers are assigned to execute the transfer, usually in the form of an Office of Security Cooperation (OSC).[2] When the program is complete, the management mission is concluded, and the OSC is disbanded or moved.

But the real needs of our partners go beyond receiving goods or services; these nations are exercising a vision of their security goals and objectives. Many of the requirements that emerge are nebulous because their perspectives are different from ours, although we often have mutual interests. While existing program vehicles such as Foreign Military Sales and International Military Education and Training (IMET) can provide means by which our partners can meet specific objectives, these partners also look to us for subject matter expertise and other intangible forms of assistance. Furthermore, many of our partners have security concerns whose resolutions fall outside of the DOD purview or that overlap multiple U.S. agencies. The narrow view of programs reaffirms stovepiped responsibilities, predetermining who administers a program and causing all others to step aside. The modern dynamic security environment requires that we address security from a holistic perspective and integrate our efforts horizontally across the U.S. Government.

Commander, Joint Task Force Operation *Atlas Response*, inspects flood damage to hospital in Machanga, Mozambique, 2000

U.S. Air Force (Cary Humphries)

Building Capacity

Active Security is a persistent and sustained level of effort focused on security assistance programs that prevent conflict in order to contribute to an enhanced level of dialogue and development. The goal of Active Security is to enable our partners to marginalize the enemies of peace; minimize the potential for conflict; foster the growth of strong, just governments and legitimate institutions; and support the development of civil societies.

The meaning of the term *programs* is greatly expanded beyond that inferred from the *Security Assistance Management Manual*. It refers to the combination of all actions a unified command conducts to address partner needs in support of U.S. foreign policy. A program results in the creation or improvement of a partner's capability, which may or may not include procurement of a system. The land management program for Mozambique was an example where the result was the creation of a process within the Mozambican government that permitted greater indigenous crisis response in the event of another Zambezi River flood. For USAFRICOM, potential focus areas for programs include enabling Africans to defend their homelands, defeat terrorists, and address regional conflicts through further development of peacekeeping capacities. Command programs will also build local capacity to protect civilian populaces, conduct disaster relief, and respond to health crises.

USAFRICOM's intent is to assist Africans in providing their own security and stability and helping prevent the conditions that could lead to conflicts

The components that could comprise a program include procurement (sales, grants, leases, and loans), training, education, logistics and sustainment, exercises, activities, employment, and communication. The goal of these components is to further the partners' abilities to build the capacity to self-sustain their newly gained capabilities, which broadens the context of these components. For example, training is more than supporting the acquisition of new skills by the partners' servicemembers and train-the-trainer capabilities of their leaders; it is about assisting the partners' development of the training base to ensure these skills are retained. Education is more than offering IMET slots; it is about fostering the develop-

ment of comparative educational programs that further military professionalism across the total force, officer and noncommissioned officer, in accordance with the partners' needs.

A component worth further explanation is activities. These are events that achieve the objective of a program by demonstration or example. An example is the deployment of medical personnel to perform humanitarian assistance in a grief-stricken region. They do not necessarily transfer skills or expertise as do training or exercise events, but they establish goodwill and further relationships with our partners. However, such activities conducted in isolation and not as part of an overall program normally fail to produce lasting positive benefits and therefore do not further our objectives.

Employment, the use of a newly gained capability to meet a real-world need, is often thought of as an end result or measure of a program's success. By this thinking, the program concludes with the capability being put to use in operations with sustainment from the United States, and the program is then assessed according to whether the capability is proven. In reality, many of the capabilities gained through our programs are employed immediately or continuously to meet current partner needs, and the results of that employment must be fed back into the communication process to refine the requirements and adjust the program.

Communication is an important but often underappreciated component. It expresses the breadth of communications between us and our partners related to the development of a capability. It includes contacts that focus on learning about, refining, developing, and promulgating requirements that become a program, as well as the series of assessments and followup contacts that keep the program on track or that adjust it as needed. It includes mentorship that establishes developmental relationships between U.S. subject matter experts and partner leaders, encouraging broader understanding of the capabilities built and their employment. But most importantly, it includes dialogue in which we talk with our partners in order to explore our respective assumptions and promote greater understanding without necessarily achieving conclusion, as one seeks in a debate. Dialogue reinforces partnerships by encouraging learning and keeping options on the table that could be useful as the strategic environment changes. This component is underappreciated because it does not necessarily produce anything tangible; therefore, we tend not to think of it as an integral part of any program. However, communication is vital in building the relationship that sets the conditions for a program to succeed and for our partners to capitalize on that success over time.

To employ communication effectively, the unified command must be a listening and learning organization. It will be a culturally aware command that promotes dialogue over debate, possibilities over procedures, consultation over informing, and consensus over cookie-cutter solutions. It fosters innovative thinking that allows us to continuously assess our effectiveness and find ways to improve on our activities. It leverages modern information technologies that allow instant access to an unlimited wealth of knowledge, perspectives, and ideas that can contribute in new and innovative ways. A listening and learning organization proactively and rapidly analyzes the environment, consults with partners, and proposes programs that meet their unique needs. It eschews the easy solution of blindly tapping into an existing large program because it is there and available and because programs often do not exactly fit our partner's needs or deliver the desired effects.

These components together comprise the *persistent and sustained level of effort*. As procurement activities are completed, the requirements for communication rise. Second-order impacts of a program need to be assessed in the context of changes in the security environment. The incorporation of training and sustainment into the partner's institutional base normally lags behind the original fielding of equipment and acquisition of new skills. Also, most security assistance is conducted on a bilateral basis, but we also want to ensure that regional objectives are met and encourage regional communication among partners to leverage these new capabilities to meet broader U.S. and partner interests.

training is about assisting the partners' development of the training base to ensure these skills are retained

The job is hardly done once equipment is fielded. Short-term programs cannot achieve these results because the impact of a short-term program is felt only by those elements trained and lasts only as long as those elements remain together. Programs exercised under a persistent and sustained level of effort mature over time and allow adjustments, so better information can be used to gain better effects on a wider scale. They also instill confidence in our partners that as situations change and new requirements emerge, USAFRICOM will be there to help.

Paradigm Shifts

Active Security requires a holistic look that encourages us to work in unison across agencies, and fosters greater ability for our partners to build capacity to conduct operations with well-trained, disciplined forces that respect human rights and the rule of law, with the ultimate goal of preventing conflict. As applied to USAFRICOM, it will also prepare African forces to better address shared challenges, strengthen legitimate governments, and make less likely the requirement for the United States to conduct unilateral operations.

Active Security requires us to be a trusted and reliable partner, something that is neither easy nor automatic. Building partnerships in Africa requires time, patience, consistency, and understanding. To be effective, we must develop mutual confidence in what we can do together at the theater, regional, and bilateral levels. We must maintain mutual respect, recognizing that our needs and theirs are equally important, not mutually exclusive, and are probably complementary. Most importantly, the result is the mutual confidence and competence that allow us to act as a combined team when necessary.

Active Security involves a cultural change within unified commands and the broader joint and interagency processes that employ it. In particular, there are three culture shifts already visible within USAFRICOM.

Focused on Small Activities. Security-based activities do not always require significant employment of forces to achieve great results. Operation *Enduring Freedom–Trans-Sahara* (OEF–TS) is a perfect example. In support of nine African nations, OEF–TS strengthens counterterrorism and border security efforts, promotes democratic governance, reinforces bilateral military ties, and enhances development and institution-building. It assists governments seeking to control their territories and prevent terrorist groups from using their uncontrolled areas as safe havens. OEF–TS has produced extraordinary results, yet the majority of activities involve only a handful of Servicemembers scattered among the participating countries.

Other examples are the MEDCAP and Veterinarian Civic Action Program. These activities involve small numbers of doctors, nurses, veterinarians, and other medical specialists deploying to partner nations. In addition to curing the sick and healing the wounded, they build medical capacity in accordance with what partners request, build field hospitals or clinics, and provide emergency response training. The results are increased capacity for partners to provide for the needs of their own people, new experience and knowledge for our own medical people, and greater goodwill between those nations and the United States.

One challenge of smaller programs, however, is that they usually require U.S. Servicemembers who have high-demand skills or subject matter expertise. Certainly that is true with the special forces involved in OEF–TS and medical personnel participating in MEDCAPs. Currently, the pools of such talent are very limited, and such assets are also in great demand elsewhere. Enlarging the pools of resources, whether through expansion of military assets (that is, more special forces), building cooperatives with nongovernmental organizations, or partnering with other nations who have similar skills is another way of providing security assistance.

Poised to Leverage Opportunities. Active Security means a unified command is postured to take full and immediate advantage of opportunities as they arise. The Africa Partnership Station (APS) is a perfect example of leveraging an opportunity. The concept behind the deployment of APS to the Gulf of Guinea was a result of the Gulf of Guinea Ministerials in Cotonou, Benin, in November 2006. The sentiments of those in attendance were that maritime security was crucial to ensuring the region's economic development and stability and that regional solutions were necessary. The ministers, as a collective, enumerated their needs and priorities. We listened and were postured to respond with tailored training and assistance that also supported U.S. foreign policy goals.

security-based activities do not always require significant employment of forces to achieve great results

Aid workers retrieve flood relief supplies dropped by U.S. Air Force in rural Kenya

CJTF–Horn of Africa (Robert Palomares)

The APS deployed to the Gulf of Guinea region from October 2007 through April 2008 to improve maritime security and safety. It has established an at-sea training platform onboard a single ship, providing a sustained regional presence while employing a minimal footprint ashore. With west coast African nations from Senegal to Angola participating, APS conducted training on Maritime Security Awareness, operational medicine, damage control and firefighting, at-sea interrogation techniques, procedures for boarding rogue ships and securing their personnel, and hand-to-hand combat training.

APS accomplished far more than training. It welcomed partners on board such as the nongovernmental organization Project Hope, which provides medical assistance and training for doctors and emergency services. While in Ghana, a team of Navy Seabees helped construct a medical clinic for use by both military and civilian personnel. And it got the call to assist in crisis response. The APS moved early to Cameroon to aid with the Chad relief effort, delivering 27 pallets of food and medicine to ease the refugee crisis in northern Cameroon.

The development of APS was possible because we were poised and postured with the capability to respond quickly. As a result, we greatly contributed to maritime stability and security in the Gulf in both the short and long terms.

However, in general such quick responses will be challenging for several reasons. First, USAFRICOM will not have forces permanently stationed in theater. Therefore, it must compete with the global force pool to source all its programs, and priority understandably goes to unit rotations in combat operations in Iraq and Afghanistan. Second, although programs such as APS and other security assistance ventures provide immediate gains for the receiving nation, the longer term impact is much greater but difficult to quantify. In our measurement of success, we tend to look for "guaranteed" return on investment, which steers us toward more short-term projects. Third, the demands on the force have caused us to seek greater predictability in the apportionment and allocation of units to the unified commands, thus increasing lead times. This is especially true for the high-demand, low-density capabilities that play vital roles in security assistance. Hence, we will be challenged to maintain flexibility, which is essential to Active Security and allows us to leverage the opportunities that could arise.

The solution is to reexamine our operations and make sure there are adequate numbers to support current operations, planned operations, and security assistance requirements, and then to have a special pool set aside that allows us flexibility and versatility.

The situation in Africa is dynamic and complex, and the pressure on the national governments for securing their territory and caring for their people is great. Many have limited resources and significant needs. USAFRICOM must be poised to respond with programs and resources when those nations reach out to us.

Postured to Help the Africans Leverage Success. Everywhere we have traveled in Africa, we are given the message by the leadership that Africans want to provide for their own stability and security and not depend on foreign assistance. It is also in our interest to avoid creating dependency. USAFRICOM's approach is two-fold: partnering with African initiatives whose goals are compatible with our own and leveraging successful U.S. military programs as a means by which the Africans can build their own indigenous capabilities. Two examples of the former were the subject of our visit to Mali earlier this year.

demands on the force have caused us to seek greater predictability in the allocation of units to the unified commands, thus increasing lead times

The Bamako Peacekeeping School is an initiative of the Malian government to train its personnel to conduct peacekeeping missions. Its curriculum is based on the requirements of the Economic Commission of West African States, and it accepts students from 10 African nations. Argentina, Canada, France, and the Netherlands have provided instructors, and the United States is an associate member on the council and has provided automation equipment. In its first year of operation, the school trained 600 students and is working to increase that capacity. Also, its initial charter was individual training of officers, but it seeks to expand to collective training. USAFRICOM is becoming an active partner in this endeavor.

The Military Intelligence Basic Officer Course–Africa (MIBOC–A) is an initiative to provide basic training for military intelligence officers in Africa. When we visited, 26 officers from seven West African nations were in attendance. While we played an integral role in the development of this school, it is run by Africans.

Both of these activities enjoy the advantage of Africans providing for their own needs so they become self-sustaining endeavors. Our assistance is welcomed as a partnership rather than as interference from a foreigner.

APS is a successful U.S. program that could spawn an African initiative providing similar training and exercise opportunities on a continuous basis. For the moment, let us call it a Gulf of Guinea Maritime Safety and Security Academy. In addition to APS rotations of finite duration, such an academy would be available to all sailors in the region, with readily tailored curricula that address current maritime issues, challenges, and threats. Sailors trained by APS personnel could become instructors in this academy, forging useful relationships not only with the U.S. Navy, but also with other navies that have similar goals. The APS would have been successful at adding value to stability and security in the long run.

U.S. Navy (Elizabeth Merriam)

West African naval officers participate in exercise led by U.S. Coast Guard International Training Division

Interagency Inroads

Openness and transparency on our part are essential. It is well known that there have been lost opportunities to establish programs or partnerships because of misunderstandings or conflicts within the U.S. Government or where lines of authority established for particular situations created bottlenecks or inhibited rapid response under new circumstances.

Active Security, while currently being applied only in the context of USAFRICOM, can overcome deficiencies across the entire U.S. Government. The notion of a "persistent, sustained level of effort" is not peculiar to the military. It can be exercised by all the elements of national power, especially informational. But for it to succeed, all these elements must work in harmony. It requires balancing the perspectives of each agency, mapping the authorities and responsibilities in such a way that collective solutions can be found, so Washington is perceived as responsive and reliable. It also requires openness and transparency to give partners a greater understanding of our perspectives. This way, as political decisions are made about the expenditure of resources for USAFRICOM activities, partners follow the rationale sufficiently that the team effort is sustained and healthy even as direct government support experiences temporary reductions in response to changes in the global security environment. (Both the Department of State and U.S. Agency for International Development have been providing persistent, sustained assistance for decades.)

Active Security is a philosophy grounded in strategy. It requires clearly defined strategic ends and the identification of ways and means to support them. However, it challenges some of the current processes found in joint doctrine as well as DOD business practices used by unified commands to develop their theater strategies.

For example, the current strategy development process is designed to function over a multiyear basis. That is, developing the ends and

ways today generates the means in future years. It is grounded in a largely sequential process of assessing the security environment, identifying threats, developing courses of action to respond, and therefore identifying resources necessary to execute those courses of action. While this process serves well the existing force allocation processes that apportion forces over the course of Program Objective Memorandum cycles, it makes it difficult to exploit opportunities as they arise, particularly for unified commands that lack permanently assigned forces. It also causes mismatches with the shorter resourcing cycles of our interagency partners. The dynamics of the African environment and impacts of continuous sustained security engagement with our partners require a flexible and responsive model of translating requirements into programs and resources in a shorter time frame. It also requires business rules that work in harmony with other government agencies.

It also puts forth a sizeable challenge to the force allocation models used to prioritize missions. Notwithstanding the fact that ongoing and demanding operations such as *Iraqi Freedom* and *Enduring Freedom* are rightly our top priorities, in general those activities that serve to prevent conflict, such as the security assistance programs described above, have almost always tended to fall in the lowest priority. Therefore, programs that have reduced the need to commit U.S. forces in the long term often are at risk.

Programs do not always produce immediately measurable results. While one can measure the numbers of African soldiers and sailors trained during APS missions or MIBOC–A classes or the number of clinics built, the real measures of success relate to the true goals of preventing conflict and establishing self-sustained security and stability. These are elusive. The opportunity to gauge how well a nation can respond to crisis sometimes only comes when a crisis occurs. The real results of security assistance efforts manifest themselves after years or decades. We acknowledge that occasional setbacks due to unfavorable political or economic conditions are a possibility. The wrong answer is to become too fickle when this occurs, as it may cause us to forfeit our standing as a nation rebounds. Again, a persistent and sustained level of effort is critical.

Meantime, while security is a necessary precondition to development, progress in development is a factor in maintaining lasting security and stability. In other words, a comprehensive government approach is required. However, aligning priorities across the interagency community has been next to impossible, not so much because the priorities naturally differ but because of the lack of transparency in the decisionmaking processes. Consequently, decisions made by one agency to reduce or alter support to a given nation cannot be addressed by other agencies in a manner that permits either alternate support mechanisms to be developed or helpful communication with that partner. Greater transparency is needed if we are to exercise the flexibility, versatility, and consistency that Active Security demands.

Beyond Phase Zero

Because theater security cooperation plays such an important role in Active Security, some may believe that it is just another name for Phase Zero, which attempted to capture and codify the types of theater security cooperation activities that geographic combatant commands performed outside of named operations. However, as both a moniker and a philosophy, Phase Zero falls short.

First, joint doctrine describes Phase Zero as "Shape," which is the opposite of an Active Security approach.[3] *Shaping* asserts our influence over the environment in such a way that conditions are favorable for future operations. Active Security recognizes that the environment belongs to our partners, and it is our relationships with those partners that determine the nature of that environment. This is why Active Security requires us to be a listening and learning organization. Our full appreciation of our partners' perspectives and support of their needs are what ultimately set conditions that are favorable for preventing conflict and avoiding the need for conducting operations.

Next, by referring to it as a "phase," many (including our partners) misunderstand it as a natural precursor to traditional military operations. When certain conditions arise in Phase Zero, go to Phase One. But this is more than a perception issue. The definition itself poses problems: "In joint operation planning, a [phase] is a definitive stage of an operation or campaign during which a large portion of the forces and capabilities are involved in similar or mutually supporting activities for a common purpose." Yet in reality, activities associated with Phase Zero are by nature indefinite and enduring. Active Security takes that notion one step further—that these activities must be exercised at a persistent and sustained level of effort through all other phases. Phase Zero had no such qualifier.

Furthermore, Phase Zero and Phase One have proven to be apples and oranges. Unlike Phases One through Four in a traditional campaign, the alleged transition from Phase Zero to Phase One is unclean and unpredictable, and in fact may not actually occur. In the case of Mozambique, should the Zambezi have flooded in 2004 with the programs having yet to be completed, the Phase Zero activities would likely have continued during any U.S. joint operation that might have occurred. Phase Zero and Phase One would not only occur simultaneously; they would probably be fully independent of one another.

Active Security represents a fundamental shift in the way we address and prioritize security assistance. It is clearly within our national strategic interests to prevent conflict and foster conditions that permit development in Africa. Doing so requires a full understanding of the perspectives and needs of our African partners, so we can provide them with programs that meet their needs and support U.S. foreign policy and national security objectives. It requires new business rules that permit unified commands the flexibility and versatility to exercise those programs quickly and effectively and that exercise the necessary persistence to ensure the programs produce the desired long-term effects.

We have had tremendous success with a number of programs in Africa precisely because Active Security principles have been in force. However, we have treated such principles as the exception. In USAFRICOM, they will be the rule. It is what our partners want from us, and it is in our national interest. **JFQ**

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NOTES

[1] Department of Defense Publication 5105.38–M, *Security Assistance Management Manual* (Washington, DC: Department of Defense, October 2003), 33.

[2] These come under various names, including Offices of Defense Cooperation and Offices of Military Cooperation.

[3] Joint Publication 3–0, *Joint Operations* (Washington, DC: U.S. Joint Forces Command, February 2006), IV–27; Joint Publication 5–0, *Joint Operation Planning* (Washington, DC: U.S. Joint Forces Command, December 2006), IV–35.

The Road to a New Unified Command

By ROBERT T. MOELLER *and* MARY C. YATES

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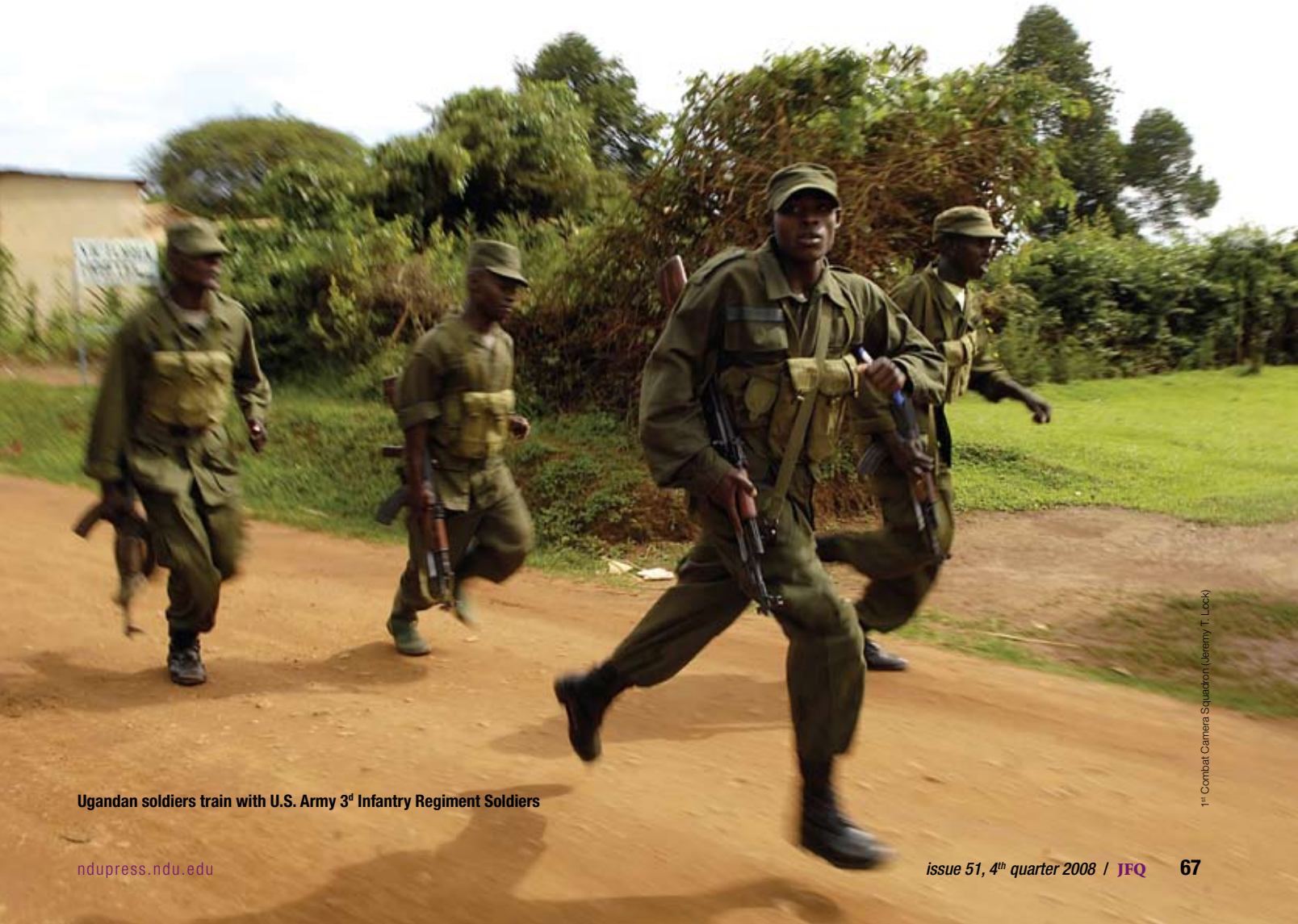
On October 1, 2007, with the confirmation of its first commander, U.S. Africa Command (USAFRICOM) was officially declared at "initial operating capability" (IOC). Shortly thereafter, its newly assigned leadership assembled for a 1-day offsite conference to concentrate on two vital tasks: building the new team and hammering out a statement of the command's mission.

The participants were an energized mix that included Active and Reserve military from all Services and civilians from the Department of Defense (DOD), Department of State, and the U.S. Agency for International Development (USAID). Participation crossed ranks from senior general officers to lieutenant colonels. It included those who were involved with the command as far back as 2006, when USAFRICOM was just an idea, as well as some who arrived after IOC and others who were on temporary duty, designated for but not yet assigned to the command. The result was a lively dialogue to which everyone contributed. In essence, the offsite demonstrated horizontal integration and helped establish the command's direction over the following months. All agreed it was the right way to do business.

It is indeed rare that those in the joint or Service communities are given the



Ugandan soldiers train with U.S. Army 3d Infantry Regiment Soldiers

1st Combat Camera Squadron (Jeremy T. Lock)

opportunity to participate in the establishment of a new command, so one could expect to see high energy and excitement generated during formative events such as the first offsite. But getting the command to IOC and subsequently to unified command status took a great deal of hard work and intellectual capital. Dedicated professionals from DOD, State, and other agencies worked together to create an innovative command well suited to meet the unique requirements of the diverse African environment. They also tackled the tedious and detailed work of transferring missions from three other unified commands, growing the command's manpower by a factor of six, and constructing a headquarters footprint out of limited facilities at Kelley Barracks in Stuttgart, Germany, the Cold War home of the U.S. Army VII Corps.

The purpose of this article is to highlight both the innovations and intellectual work that took USAFRICOM from concept to reality. There are many lessons learned from this experience that will be useful if another unified command is created.

Background

The U.S. Africa Command was created to strengthen our security cooperation efforts with the nations of Africa and to bolster the capabilities of our African partners. Through persistent, sustained engagement focused on building partner security capacity, supporting humanitarian assistance efforts, and providing crisis response, USAFRICOM will promote a stable and secure African environment in support of U.S. foreign policy. On September 30, 2008, USAFRICOM assumed mission responsibility as a unified command and serves as the DOD lead for support to U.S. Government agencies and departments responsible for implementing U.S. foreign policy in Africa. To appreciate the value of what the command has become, a brief review of the events leading to IOC follows.

The idea of an Africa command was not new, but until recent years, the continent of Africa remained a lower national security priority. The marked changes in the African strategic environment and the increase in bilateral security assistance and partnership activities during both the Clinton and Bush administrations suggested that our relationship with Africa was expanding, and the Unified Command Plan (UCP) might need to evolve in kind. The continent is growing rapidly in economic, social, political, and military importance in global affairs. It is democratizing at a rapid rate, with more nations empowering their citizens through multiparty elections than ever before.

As institutions such as the African Union (AU) and the Regional Economic Communities (RECs) were becoming more important, the UCP was not set up to work with Africans in collective groups. One example was the fact that the AU headquarters was aligned with the U.S. European Command (USEUCOM) but located in Ethiopia, which was aligned within the U.S. Central Command (USCENTCOM) area of responsibility. Indeed, the seam between USEUCOM and USCENTCOM split interested parties in a number of key security issues, most notably the conflict in Darfur. The existing divisions did not support an effective approach to prevent and respond to humanitarian crises, improve cooperative efforts to stem transnational terrorism, or sustain enduring efforts that contribute to African unity and bolster security on the continent.

With respect to Africa, it was clear that the UCP needed updating. DOD needed a command to work exclusively on African security issues. In summer 2006, the Secretary of Defense tasked the department to analyze and make recommendations regarding adjustments in the UCP, including the potential creation of a unified command, to better align with national interests and security requirements. The initial recommendations concurred that a new command was needed for Africa, so the Secretary directed the establishment of an Implementation Planning Team (IPT) in November 2006 to develop options for creating a command to facilitate security cooperation programs in Africa. The IPT consisted of members of the security assistance divisions from USEUCOM and USCENTCOM, DOD representatives, and senior representatives from the Department of State and other U.S. Government agencies. Its primary function was to develop the concept plan for the new command's establishment, including initial location, mission and purpose, organizational structure, and timelines. The IPT plan was submitted to the

the seam between USEUCOM and USCENTCOM split interested parties in a number of key security issues, most notably the conflict in Darfur

U.S. Air Force (Mark Harper)

Tanzanians fill buckets from water pump inspected by members of CJTF–Horn of Africa

President, who on February 7, 2007, directed the establishment of USAFRICOM, stating that the command should be fully operational by the end of fiscal year 2008.

Toward the Mission

With that, in February 2007, the 60-person U.S. Africa Command Transition Team was established in Kelley Barracks, only a short drive from USEUCOM headquarters. The team's tasks were to:

- develop an organizational structure that integrated DOD military and civilian personnel with the interagency community. This would be an important step toward facilitating an interagency approach to security issues that did not fall singularly within DOD purview.
- establish two management focus areas: civil-military activities and military plans and operations. Civil-military activities were expected to comprise a significant amount of the command's efforts. Therefore, naming a senior State official to oversee those efforts as a deputy was proposed in addition to having a military deputy.
- seek ways to enhance command presence and effectiveness at the Country Team level across the continent. In terms of Offices of Security Cooperation and other agencies, the U.S. military presence in Africa is small. Given expectations of increasing activity in the form of missions, activities, programs, and exercises, DOD presence within the Embassies deserved another look.
- establish a regional presence on the African continent that would facilitate appropriate interaction with existing African political-military organizations. Similarly, the team looked at the potential for establishing the headquarters in Africa, in whole or in part. The hypothesis was that being in Africa would facilitate the partnerships that we want to build and improve the efficiency of our programs and activities.

The initial work of the transition team led to the publication of the *AFRICOM Implementation Guidance* (AIG), signed by the Secretary of Defense in June 2007. This document formalized the parameters, requirements, and timelines for the transition team's activities. Meanwhile, teams comprised of members from the Office of the Secretary of Defense, the transition team, and other agencies visited the continent to consult with leaders of various African nations about the command.

In late September, General William E. "Kip" Ward, then–deputy commander of U.S. European Command, was confirmed as the first commander of U.S. Africa Command. On October 1, 2007, the transition team officially disbanded, and USAFRICOM was at IOC as a subunified command under USEUCOM.

Unfortunately, the consultations held prior to IOC were insufficient to ensure our partners understood the intent and purpose of the command. With respect to the Africans, the pace of the command's establishment combined with limited time and resources to engage meant that not all desired partners were consulted, while others were less than satisfied with the information provided. This allowed questions, concerns, and misperceptions to arise in the minds of some African leaders, the media, and segments of the African populace. Meanwhile, consultations with U.S. Embassies were also insufficient to permit the Country Teams to help address these questions and concerns. Consequently, USAFRICOM was not universally welcomed. It was clear that strategic communication needed to be an immediate focus for the command.

However, more communication would not work; it had to be focused. Some Africans suggested that the priority for engagement should be with the AU and its RECs first, rather than continuing the bilateral approach with various African nations. Therefore, the commander's first visit to the continent was to the AU headquarters in Addis Ababa, while the deputies visited the RECs. Media engagement was important as we wanted visibility and to demonstrate openness and transparency to help build the relationships we needed. At the same time, directors and staff members engaged with nongovernmental organizations, think tanks, academia, defense industry groups, and others.

An important first step was to engage the U.S. Ambassadors to Africa. It was fortunate that the Department of State was hosting its annual Sub-Saharan Africa Chief of Mission Conference in Washington, DC, shortly after IOC. The commander addressed the conference, described the purpose and intent behind the command, and requested the input of the chiefs of mission on how the command could best support their needs. Mission authority over all U.S. Government activities within a host nation was the commander's primary message.

The commander also established three strategic communication themes that comprised the main message of the command: building the team, enabling the work of Africans, and adding value and doing no harm. This message was then carried to our partners in a series of consultations on the continent along with numerous engagements with the media, other U.S. agencies, defense industry and private enterprise, and other audiences.

Building the team had two components, internal and external. In the first months, the command nearly tripled in size, and a steady rate of rapid growth was projected over subsequent months. This placed a premium on training, education, and space to ensure the new team got settled quickly. Externally, we understood the importance of listening to and learning from our partners. Therefore, we invited them to give counsel and help the command form to best foster the development of security assistance programs.

Enabling the work of Africans, alternatively referred to as "African solutions to African challenges," reinforced the USAFRICOM goal to respect African sovereignty and support the development of the necessary capacity for Africans to provide for their own security.

Adding value and *doing no harm* were two sides of the same coin, focusing on improving the many ongoing collective, significant, and diverse security cooperation programs on the continent, while not disrupting or confusing current security and stabilizing efforts. We stressed the desire to ensure that U.S. military efforts were harmonized with those of other agencies to maximize the effectiveness of our programs in Africa. The Department of State held the lead role in setting policy, and the command would take no actions without the consent of the U.S. Chiefs of Mission.

Additionally, there was one issue that remained a source of concern among many

the pace of the command's establishment combined with limited time and resources to engage meant that not all desired partners were consulted

Africans—the question of USAFRICOM presence on the continent. During the transition team period, there were open discussions about the desire to include some form of headquarters presence on the continent in order to facilitate our engagements with partners and ultimately deliver better programs. The discussions were largely conceptual and formative and did not result in a request to any nation to host the command. Still, U.S. Africa Command's number one priority is programs, and we explained to our partners that the management and execution of programs in Africa were intended to add further value by establishing some form of presence and that we desired to consult with partners to develop ways ahead. The same reassurances were addressed through engagement with African media to reach out to a wider audience.

Organizing for Success

U.S. Africa Command's innovative nature was another point that needed explanation. How it would be innovative, and why it would be markedly beneficial, were tougher to explain and measure.

Functionally Structured, Horizontally Integrated. The headquarters is structured to function differently from other unified commands in many ways. USAFRICOM considered security assistance programs and partnerships as the primary activities of the command and designed the headquarters accordingly, while also recognizing the need to be prepared to conduct military operations as directed by the President. It was determined early on that the traditional J-code structure was not the best model, so the IPT and transition team set out to design a new one. The design was not to be static but instead was to evolve as we learned more about what worked best. The first major innovation was the establishment of cross-functional directorates. Some are completely new, while others combine functions in different ways.

The newest and most innovative directorate is Outreach. Partnership, engagement, and strategic communication are functions that have grown in importance for any unified command, but USAFRICOM is the first to dedicate a directorate to them. Outreach consists of three divisions. The Partnership Division manages contacts with interagency, intergovernmental, nongovernmental, and multinational agencies that have or could potentially have interests in Africa that impact the command's mission. The Strategic Communication Division manages the strategic communication plans and activities of the command and runs the strategic communication working group that includes members from across the headquarters to ensure the consistent application of themes and messages.

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435th Air Base Wing (Marc I. Lane)

Rwandan Defense Forces prepare to board flight to Sudan as part of NATO response to African Union peacekeeping mission in Darfur

The Directorate of Intelligence and Knowledge Development is a significant extension of the J2 (Intelligence). Going beyond traditional intelligence functions, this directorate helps the command understand the strategic environment in Africa from the perspectives of others. However, the nature of the environment places a greater premium on collecting and analyzing data from open sources and engagement with host nation, nongovernmental, and various nontraditional partners. Directorate members also recognize that they should share this information more openly and transparently than traditional intelligence functions are accustomed to. The directorate captured this spirit in the term *YESFORN*, a play on *NOFORN* or "no foreign nationals." The goal is to integrate our knowledge development capabilities with those of our partners so we can have timely, actionable knowledge of the environment that will help in preventing conflict.

The Directorate of Operations and Logistics consolidates the management of functions associated with military operations. Divisions within this directorate include current operations, future operations, information operations, antiterrorism, engineering, logistics support, medical, and the Deployment and Distribution Operations Center.

The Directorate of Strategy, Plans, and Programs performs the analogous functions for security assistance, but also prepares the command strategy and performs contingency planning. The Engagement Division provides the country desk officers who prioritize theater security cooperation activities and assist with the political-military interface, while the Security Cooperation Plans Division executes those activities. This division also oversees and manages the Offices of Security Cooperation stationed in Africa.

The Directorate of Resources is more than just a combination J1 (Human Resources) and J8 (Comptroller). It also serves as the command's transformation directorate, monitoring advances in applicable strategic research, science, and technology.

The Directorate of Command, Control, Communications, and Computers (C4) Systems is chartered with information architecture (including in Africa), information assurance, and systems support. Also, a new special staff branch, Knowledge Management, establishes the command's knowledge management business practices and researches tools to permit collaboration and information-sharing throughout the command.

Even though these directorates consolidate critical functions, horizontal integration is still essential for mission accomplishment as many activities impact the whole headquarters. Strategic communication is an excellent example. Consequently, USAFRICOM has taken several steps to inculcate horizontal integration. During the IOC year, the command conducted an extensive study of its boards, bureaus, centers, cells, and working groups.

Interagency Personnel Leading the Command. All the unified commands are increasing their emphasis on interagency participation, but U.S. Africa Command is taking that one step further with the placement of interagency personnel in leadership positions throughout the command. The most notable is the establishment of two deputies to the command, one interagency civilian and one military, serving equally under the commander. The deputy to the commander for civil-military activities (DCMA) is a senior Department of State official who supervises U.S. military coordination with other U.S. Government agencies working in Africa and directs the command's civil-military plans and programs, outreach, and strategic communication effort. The DCMA also has lead responsibility for policy development, resourcing, and program assessment for the command's theater security cooperation program. The deputy to the commander for military operations directs the command's military-to-military relationships and operations in support of U.S. Government programs and exercises military command authority in the commander's absence.

the deputy to the commander for civil-military relations brings to the command years of expertise in African affairs and supervisory experience with Country Team members

The establishment of the DCMA position has been a positive innovation. It brings to the command years of expertise in African affairs and supervisory experience with Country Team members representing numerous U.S. Government agencies. These diverse skill sets offer in-depth subject matter expertise and organizational experience that greatly enhance the command's ability to accomplish the mission.

Interagency leadership also extends throughout the staff. The director of outreach is another senior State official. A senior USAID official serves as the director of programs, one of the divisions under the Directorate of Strategy, Plans, and Programs. A Department of Commerce official serves as the deputy director of resources. These directors have the same authorities and responsibilities over their staffs as any other director within the command, with a notable exception: they cannot command U.S. forces during military operations.

Members of other agencies also play prominent roles as senior advisors to the commander. For example, USAID has provided a development and humanitarian assistance advisor who reports directly to the DCMA. The Department of the Treasury has provided a senior advisor now working within Strategy, Plans, and Programs, as is a senior Coast Guard officer from the Department of Homeland Security. These are in addition to the foreign policy advisor to the commander, a traditional advisory position provided by the State Department to unified commands.

Because of the invaluable subject matter expertise these interagency members provide, they are integrated into the command, placing them within the headquarters where their impact can be the greatest. We specifically avoided assembling or placing these and other potential advisors into a single collective such as a Joint Interagency Coordination Group (JIACG) that has been established in other unified commands. While JIACGs have been successful elsewhere, creating one in U.S. Africa Command would signal a sense of separation from the command, defeating the open and horizontal environment we consider vital.

MAPEs

Establishing the command required hard work from the action officers to the senior leaders. The most complex activity of the IOC year was the mission transfer process that managed the acceptance of missions, activities, programs, and exercises (MAPEs) from USEUCOM, USCENTCOM, and U.S. Pacific Command. It was the ultimate horizontal activity. Several hundred MAPEs set for transfer from the three unified commands affected and involved everyone in the

command. The process had to be synchronized with U.S. Africa Command's growth because the transfers could only occur when the command had the manpower to continue the mission seamlessly—*do no harm*.

There are four broad categories of MAPEs, each different in scope and complexity. *Theater security cooperation activities* encompass our bilateral relationships with the militaries of each nation, the U.S. missions to that nation, and related programs such as Foreign Military Financing, International Military Education and Training, and others. It also encompasses theater and regional theater security cooperation efforts such as the Trans-Sahara Counterterrorism Partnership. *Contingency planning* encompasses all activities related to preparation for crises (that is, what capabilities we may need). *Ongoing operations, training, and exercises* encompass current activities and operations—especially Operation *Enduring Freedom–Trans-Sahara* and Combined Joint Task Force–Horn of Africa (CJTF–HOA)—that must continue seamlessly. Meanwhile, U.S. Africa Command has had to initiate its own participation in *joint and defense business processes*, such as resourcing actions and engagements with Congress, relying on the subject matter expertise of the other unified commands.

U.S. Joint Forces Command provided mentorship and training related to joint doctrine and operations to help form a unified command

The MAPEs operations planning team held mission transfer conferences monthly with representatives of the other commands. Early in the IOC year, the team mapped out a detailed schedule for when USAFRICOM would accept missions from the other commands. Simpler missions requiring fewer resources were handled earlier, such as the responsibilities for humanitarian assistance activities. Also, as other commands were realigned with U.S. Africa Command, those missions transferred with them. For example, the USEUCOM J5–Africa Division was reflagged as the USAFRICOM Engagement Division under the Strategy, Plans, and Programs Directorate. More complex missions, such as CJTF–HOA, will be transferred later, but the transfer process included regular conferences so USAFRICOM could gain the subject matter expertise to command and control the operation. Also, as USEUCOM conducted crisis response activities or other missions in Africa, the USAFRICOM Operations and Logistics Directorate participated.

Staffing

Staff training was another major activity of the command. For this, U.S. Joint Forces Command (USJFCOM) and the Africa Center for Strategic Studies (ACSS) became involved. USJFCOM provided mentorship and training related to joint doctrine and operations to help form as a unified command and established a series of staff assistance visits during the year that guided USAFRICOM through a deliberate process of forming business practices. These began with a 1-week workshop on our joint mission essential task list in January 2008, followed over subsequent months by staff process academics, tabletop exercises, and ultimately the September 2008 Command Post Exercise that certified our ability to operate as a unified command. These were helpful in bringing interagency members on board as they learned how unified commands operated.

The ACSS role was helping us understand the African environment. Although a number of transition team members had African experience, most did not, nor was there significant African experience among our IOC personnel. Consequently, ACSS conducted week-long workshops that detailed Africa's diverse history, cultures, development, and strategic challenges. As a supplement, we hosted regular professional development activities, such as Friday afternoon cinema presentations where a documentary or feature film covering an African historic event was played, followed by dialogue moderated by a subject matter expert, and the DCMA hosted a series of luncheon seminars to discuss aspects of African history and culture.

There are also the continuing challenges of forming the command outside the continental United States, such as establishing the legal agreements with the host nation, sponsoring the massive influx of military, civilian, and interagency personnel, and renovating facilities in Stuttgart to meet the operational and C^4 requirements of a unified command.

Acquiring the desired interagency manpower for the command was challenging, mainly because many government agencies already faced manpower constraints. These agencies often lacked the resources to commit personnel, especially the high-demand experts whom we would prefer, without affecting their missions elsewhere. The differences in the personnel systems of various agencies offered challenges to the command's hiring and long-term assignment processes.

Our approach was to offer opportunities for short-term introductory assignments to the command. Some agencies sent personnel on temporary duty within U.S. Africa Command, usually between 2 weeks and 2 months. It was sufficient time to actively participate in important projects and educate the command on the unique capabilities and potential contributions of their organizations. Several returned to their agencies enthusiastic

Ambassador Stewart Symington welcomes Marines and Sailors to Djibouti

26th Marine Expeditionary Unit (Freddy G. Cantu)

about their participation and subsequently convinced their superiors that a more permanent commitment was beneficial, leading to an increase in interagency assignments.

Lessons Learned

Twice within this decade, the UCP has undergone a significant revision that resulted in the creation of a new unified command. The dynamics of the modern strategic environment suggest another major UCP revision could happen. Therefore, the following lessons learned will be instructive for executing the next revision.

The most important lesson concerns the strategic communication environment and the potential that it may not be friendly. We may view changes to the UCP as an internal DOD reorganization. Affected partner nations, their people, and other U.S. agencies may view it differently. We believe more dialogue with the affected partners is necessary in advance. Depending on the circumstances, group dialogues such as existing conferences of defense leaders or foreign ambassadors may have a greater chance of success than bilateral consultations. The goal is to provide partners with a chance to participate, provide counsel, and become stakeholders.

U.S. Ambassadors in Embassies abroad are a vital link in our relations with partners and need to be among the first consulted.

The strategic communication plan needs to be simple and should stress one theme over all others: reorganization will add value to the delivery of programs. This approach does two things. First, it provides a solid logical framework about what we are doing, why we are doing it, and what we are not doing. Second, if that framework demonstrates that it will not improve the ability to deliver programs, then the UCP revision ought to be reviewed further.

The second lesson learned is the importance of involving other unified commands, even those that fall outside the affected areas of responsibility. Our transition team–era engagements with USJFCOM, U.S. Northern Command, and U.S. Southern Command were fruitful but not sufficient. Each unified command is innovative, meeting the unique demands of its environment and the needs of its partners. Learning how they analyzed and assessed their requirements and developed solutions was extremely valuable as we determined our structure and business practices.

The third lesson is that a new unified command should be established as a full unified command at the onset. Although placing U.S. Africa Command as a subunified command under the U.S. European Command through IOC gave us the ability to draw administrative, logistic, and mission support, it would have been more effective to establish the command as a unified command to enable the most challenging issues to be resolved upfront and not be deferred. It would have improved our ability to work issues with DOD, Joint Staff, and Service chiefs. This is especially important in manning and budgeting. It would also have established greater continuity of effort from the transition team to IOC.

The fourth lesson learned is the importance of planning for resources for key establishment activities such as mission acceptance and staff training. The influx of manpower and resources faced significant challenges in keeping with an aggressive timeline, which in turn affected the ability of USAFRICOM to accept missions and meet other milestones. In the spirit of "do no harm," we accepted missions only when we were prepared to execute them. We recommend that future timelines for establishing new commands incorporate resource issues more closely so desired timelines can be met.

It is exhilarating to create a new command in order to reflect the growing importance of our African partners, but turning it into a reality requires incredible amounts of detailed work, dedication, and energy. We appreciate the efforts of all who contributed to our establishment—from the Office of the Secretary of Defense, Joint Staff, Department of State, the U.S. Agency for International Development, other participating U.S. Government agencies, Country Teams in Africa, and fellow unified commands (especially U.S. European Command). We also thank those who participated in the Implementation Planning Team and transition team, and ultimately the Servicemembers, civilians, and contractors of U.S. Africa Command. Achieving full unified command status is a major accomplishment, one that leads to greater security and stability on the continent of Africa and its island nations. **JFQ**

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USAFRICOM
The Militarization of U.S. Foreign Policy?

By DENNIS R.J. PENN

The U.S. Government is in a unique position to leverage a momentous and historic shift in military focus: that it is now possible to mitigate the conditions that lead to conflict by working with allies and partners to shape the international environment and thus promote stability and security.[1] U.S. Africa Command (USAFRICOM) is the embodiment of this opportunity. Though American efforts to date represent steps in the right direction, they are nonetheless overly reliant on the Armed Forces and, as such, do little to alleviate the perception of the militarization of U.S. foreign policy. But the Government can mitigate and reverse this perception by implementing an integrated 3D (diplomacy, development, and defense) security engagement policy.

Converging Threads

The end of the Cold War brought an era of remarkable change in the U.S. Government. Within this confluence of change, two independent threads emerged, evolved, and eventually started to converge. The first thread deals with the continent of Africa and its rise in strategic value vis-à-vis American national interests, and the second relates to a significant shift in military focus. The two threads first

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Kenyan, Tanzanian, and Ugandan soldiers join U.S. Marines for opening of exercise in Kenya

4th Combat Camera Squadron (Nic Raven)

came together at U.S. European Command (USEUCOM), whose area of responsibility included all of Europe, Israel, Russia, and most of Africa. Through its efforts in the war on terror, USEUCOM pioneered a new approach to theater security cooperation (TSC) and traditional warfighting—Phase Zero. The command operationalized its TSC and capacity-building efforts by collaborating with regional allies and focusing on terrorism's long-term, underlying conditions. With an emphasis on interagency cooperation, coordination, and collaboration, Phase Zero represented a natural outgrowth of, or evolution in, the concept of proactive peacetime engagement. In recognition of the need for a unified response to Africa's growing importance, the George W. Bush administration established a new unified combatant command, U.S. Africa Command (USAFRICOM).

Though the arrival of USAFRICOM represents the next logical step in proactive peacetime engagement implementation, the new command underscores the appearance of policy militarization and ultimately weakens the link between the two threads. If, however, the proactive peacetime engagement thread were to reflect a nonmilitary lead coupled with still more diversified U.S. Government participation, the bond between threads could actually strengthen rather than weaken. Today, the Government is striving to do just this, but the efforts fall short of the scale of change required and do not adequately address the perceptions of militarizing our foreign policy. The bold steps recommended below might prove to be the level of change required to shift the balance in favor of strengthening the two threads and ensuring success. These steps must be permanent, come with the appropriate resources, address transformational change, and take the next evolutionary leap started in the revolution in military affairs noted above—establishing a genuinely integrated and proactive security engagement framework.

Africa Rising

Among the reasons for Africa's rise in strategic value are the continent's natural resources. In some cases, Africa will be as important a source for U.S. energy imports as the Middle East.[2] Equally important, as the atrocities in Darfur bear witness, certain elements within Africa continue to "test the resolve of the international community and the U.S. to prevent mass killings and genocide."[3] Moreover, other nations are expressing increased interest in Africa, and the world's major powers are working aggressively to seek out investments, win contracts, peddle influence, and build political support on the African continent.[4] With respect to access to Africa's oil, natural gas, and other natural resources, the United States is in direct competition with numerous nations.

U.S. national policy edicts in recent years reflect Africa's rise in strategic import. In July 2003, the President's African Policy stated that "promise and opportunity sit side by side with disease, war, and desperate poverty" and that this "threatens both a core value of the U.S.—preserving human dignity—and our strategic priority—combating global terror."[5] In July 2005, President Bush garnered G8 partner commitment for initiatives that advance U.S. priorities in Africa to include forgiving debt, fighting malaria, addressing urgent humanitarian needs, improving education, boosting development assistance, increasing trade and investment, and broadening support for peace and stability.[6] The March 2006 U.S. National Security Strategy states the United States "recognizes that our security depends upon partnering with Africans to strengthen fragile and failing states and bring ungoverned areas under the control of effective democracies."[7]

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Not surprisingly, not everyone thinks the USAFRICOM approach to proactive peacetime engagement is a good idea. This apparent "militarization" of U.S. foreign policy, though transparent to most of the domestic American audience, is glaringly obvious to a foreign audience acutely aware of shifts in U.S. policy—particularly in Africa where USAFRICOM is being met with "less than euphoria" in many states.[8] For instance, African nations are concerned that the command "will incite, not preclude, terrorist attacks."[9] To exacerbate African fears, poorly conceived references to USAFRICOM as a combatant command "plus" only serve to call greater attention to the command's military mission. Again, concerns such as these are not without foundation. Despite USAFRICOM's focus on a broader soft power mandate designed to build a stable security environment, it is still a military command and, as such, it has "all the roles and responsibilities of a traditional geographic combatant command, including the ability to facilitate or lead military operations."[10]

Revolution in Policy, Doctrine, and Strategy

In what must certainly be a genuine revolution in military affairs, the U.S. Armed Forces have fundamentally adjusted their policy, doctrine, and strategies over the last decade and a half to include an emphasis on proactive peacetime engagement as a way to achieve national strategy objectives.[11] Proactive peacetime engagement is based on the principle that it is "much more cost effective to prevent conflict than it is to stop one once it has started," and its efforts are designed to "reassure allies and partners, promote stability and mitigate the conditions that lead to conflict."[12] As it evolves to meet the emerging challenges of a complex security environment, the philosophy of proactive peacetime engagement aims to shape the international milieu to meet national interests by creating partnerships and building the capacity of allies and partners.[13] While some may argue that the military has always performed this function, its role in conflict prevention did not take root in policy until the fall of the Soviet empire—the post–Cold War era.[14] This shift away from a focus on fighting wars is at the core of the USAFRICOM mission.[15]

The introduction and inculcation of shaping and stability operations into military strategy, policy, and doctrine since 2005 signals senior leadership's categorical support for the concept of war prevention. This support is evidenced in documents such as the Capstone Concept for Joint Operations published in August 2005 and Department of Defense (DOD) Directive 3000.05 published in November 2005. Given the additional emphasis in joint doctrine, it should come as no surprise that the military's take-charge, "can do" attitude, coupled with its large resource pool, has catapulted it to the front of Government agencies in its ability to implement and support stability operations. As is the case with USAFRICOM, the military is now taking the lead across Government efforts in implementing the concept.[16]

The question, however, is whether the military *should* take the lead. Both policy and doctrine describe successful shaping and stability operations as closely integrated interagency efforts where the military often plays a supporting versus a supported role.[17] Publication of National Security Presidential Directive (NSPD) 44, "Management of Inter-

agency Efforts Concerning Reconstruction and Stabilization," in December 2005 resolved this dilemma by assigning the Department of State the responsibility to "coordinate, lead, and strengthen [U.S. Government] efforts to prepare, plan for, and conduct reconstruction and stabilization missions and to harmonize efforts with U.S. military plans and operations."[18]

Perception Management

USAFRICOM's unique approach to proactive peacetime engagement reflects the evolution in national strategy described above.[19] In keeping with the precepts of emerging policy and doctrine, command planners are "organizing along highly nontraditional lines," designing the command to "build both indigenous African security capacities and U.S. interagency collaboration" capabilities.[20] USAFRICOM's nontraditional "emphasis on development and war-prevention in lieu of warfighting" is garnering "widespread praise" throughout the U.S. Government.[21]

However, the less-than-traditional military focus is also engendering "mixed feelings" within certain quarters.[22] Some elements within State and the U.S. Agency for International Development (USAID) express concern that the military may "overestimate its capabilities as well as its diplomatic role in Africa, or pursue activities that are not a core part of its mandate."[23] These concerns are somewhat justifiable. Though the authority for international engagement belongs to State, the agency has only 4,000 to 5,000 foreign service officers in the field—far fewer than what DOD can leverage through its TSC efforts.[24] Nor do State's resources to conduct extensive partner engagement activities "match the opportunities that DOD schools, visits, exercises, equipment, and other cooperation activities offer."[25] As if there were not enough bad news, Congress effected deep cuts into State and other civilian agencies during the 1990s, significantly reducing foreign aid budget authorizations while simultaneously enhancing military capability.[26] In a concerted effort to assuage concerns over its role in the foreign policy arena, DOD press releases emphasize that USAFRICOM is not to assume "a leadership role." Rather, the command will work with the African Union as well as with other international partners and multinational organizations.[27]

Congress effected deep cuts into State and other civilian agencies during the 1990s, reducing foreign aid budget authorizations while enhancing military capability

Despite these statements to the contrary, there are those who believe that USAFRICOM—like the other combatant commands—is another prime example of American proconsuls plying foreign policy.[28] In ancient Rome, proconsuls were provincial governors responsible for overseeing the army, justice, and administration within their province. Later, the title referenced colonial governors with similar far-reaching powers. Today, pundits note that American combatant commands have "evolved into the modern-day equivalent of the Roman Empire's proconsuls—well-funded, semi-autonomous, unconventional centers of U.S. foreign policy."[29] The combatant commands' rise in preeminence reflects not only the void left by a weakening State Department but also the Government's ever-increasing dependence on its military to carry out its foreign affairs.[30]

The Goldwater-Nichols Department of Defense Reorganization Act of 1986 represents the first discernable effort to expand the geographic combatant commands' powers with legislation increasing their responsibilities and influence as warfighters.[31] As the Goldwater-Nichols Act began to flourish, the Clinton administration started expanding the role of the commands by tasking them with the mission to shape their regions using multilateral approaches in ways that exceeded the traditional role of the military.[32] The administration also learned during this period that "they could shove more and more duties onto the Defense Department," to include jobs formerly spread among the civilian agencies, and that "the military would accept it and carry on."[33] Moreover, in addition to executive and legislative efforts to expand the military's mission, DOD's self-driven shift in emphasis toward proactive peacetime engagement pushed the military further into expanded diplomatic and political roles.[34] By the end of the 1990s, the commands had become far more than warfighters.[35] They had grown to "transcend military matters and encroach into all the elements of national power."[36]

Botswanan officers in Germany learn about rail operations from U.S. Army logistics director

U.S. Army (Phillip Valentine)

Ambassador Mary Yates explains U.S. Africa Command mission to academic community at symposium

Ian Wagreich Photography

Touted as unique, USAFRICOM's mission is a genuine attempt to establish security through a blend of soft and hard power.[37] To alleviate concerns and offset strategic communications gaffes, both USAFRICOM and the Bush administration are emphasizing and reiterating the "command's benevolent intentions and nonmilitary character."[38] Strategic communications aim to reassure external audiences, particularly the African nations, that the United States is not pursuing colonial or imperial aspirations on the continent. In an environment where overcoming the challenges that Africa faces requires partnership, it is imperative that the multinational partners do not see American efforts as predatory or paternalistic.[39]

Despite an aggressive strategic communications campaign, actions *do* speak louder than words. As a result, there are fundamental questions that have yet to be addressed and that serve to undermine both the command's and the Government's credibility in the USAFRICOM endeavor. The critical question is why the military is leading an organization whose stated mission is, by definition, largely the responsibility of State. Correspondingly, what message is the U.S. Government trying to impart to its foreign partners and to those it professes to be helping when it appears to place a military commander in a position of authority over his State counterpart? Intentional or not, the Government is, via its implementation of USAFRICOM, feeding the perception of a militarization of U.S. foreign policy.

Making It Right

According to a senior USAID official, "It is clearly in the U.S. Government's interest to utilize our toolkit of diplomacy, defense, and development to counter the destabilizing effects that poor governance, corruption, and weak rule of law have on political and economic systems . . . and the threats they pose to vital American interests."[40] Similarly, in a statement regarding the military's role in Africa, the USAFRICOM commander refers to a "three-pronged" government approach, with DOD taking the lead on security issues, but "playing a *supporting* role to the Department of State, which conducts diplomacy, and USAID, which implements development programs."[41] Together, these two statements provide a glimpse of a potential solution for the demilitarization of U.S. foreign policy—a concept referred to as *3D security engagement*. The 3D concept supports three equal pillars of engagement—diplomacy, development, and defense—working in unison to address threats such as terrorism, proliferation of weapons of mass destruction, poverty, health pandemics, and others.[42] By including development and diplomacy as equal parts of the security strategy equation, the 3D concept deemphasizes the militaristic aspect of security engagement. It also advances the views reflected in major U.S. policy edicts.

Within the U.S. Government today, the departments and agencies whose mission sets most closely represent the 3D security engagement concept are State, DOD, and USAID. These organizations have the responsibilities, authorities, resources, and capabilities to reassure allies and partners, promote stability, and mitigate the conditions that lead to conflict.[43] Other elements of the U.S. Government, international and regional organizations, and nongovernmental organizations (NGOs) would matrix into and out of the 3D security engagement process as required. In this way, the concept is not a replacement for integrated interagency interaction; rather, it is a way to better organize and implement interagency activities. Indeed, the "interagency" is not a person, place, or thing.[44] It is not part of the Government; it has no leader, nor does it have a workforce.[45] The interagency is the juncture at which DOD, State, and other formal agencies coordinate, cooperate, and collaborate to achieve some objective.[46] It is a *process*.[47] Similarly, the three Ds do not specifically refer to a given department or agency. For instance, *development* does not point exclusively to USAID. Instead, it refers more appropriately to the activity of development for which USAID plays a leading role and in which DOD or an NGO might be a major participant.

the 3D concept supports three equal pillars of engagement—diplomacy, development, and defense

To implement the 3D security engagement concept and mitigate concerns over the militarization of foreign power, the Government must address key obstacles through bold reform and policy driven by national-level strategic leadership. To this end, isolated here are the four fundamental impediments to a practicable implementation of the 3D security engagement concept as it affects and relates to the demilitarization of foreign policy. Also presented here are recommendations for overcoming each obstacle.

First, there is no one common regional system for viewing the world within the U.S. Government. All the key national security elements of the Government define global regions differently, creating policy seams and overlaps that often lead to poor coordination.[48] In addition, the absence of economic data further undermines national strategic direction at the regional level.[49] To ensure that all departments and agencies view the world using the same template, the regions of the world should be realigned under one common system applicable to the whole of Government. This rather simple but critical initiative reduces complications of interagency coordination that multiply as seams and overlaps occur across the departments and agencies.[50]

Second, there is no senior functional lead to oversee security engagement efforts in regions. To improve unity of effort, reduce peer competition, and mitigate perceptions of the militarization of foreign policy, a forward-deployed National Security Council (NSC)–level representative should be established to oversee and lead 3D efforts in each region. The NSC is the "President's principal forum for considering national security and foreign policy matters with the administration's senior national security advisors and cabinet officials," advising and assisting the President with integrating all aspects of domestic, foreign, military, intelligence, and economic national security policy.[51] Given the high degree of insight into national strategic objectives inherent within the National Security Council, placing a senior NSC representative to oversee 3D efforts within each region would ensure that the principal 3D elements—DOD, State, and USAID—all work within the same national-level guidance and toward the same national-level objectives.

Third, there are currently no facilities in region to host combined 3D security engagement efforts apart from the combatant commands. To provide a shared environment for coordination, cooperation, and collaboration, as well as to diminish perceptions of a militarized foreign policy, the Government must establish 3D centers in each region

separate and apart from the existing combatant commands. Though it may be the most costly to implement, this initiative is essential to eliminating all vestiges of a militarized foreign policy. A key element in resolving where to place 3D centers sits with foreign allies and friends—potential partners who may find value and prestige in having such centers located in their nations.

Fourth, there are insufficient State and USAID resources to implement proactive security engagement activities worldwide. To offset the unequal distribution of resources among DOD, State, and USAID, and to mitigate the perception of and potential for a militarization of foreign policy, civilian capacity for both State and USAID should be increased. Forced by circumstance and by direction, the U.S. military has taken on many burdens that in the past were the purview of civilian agencies; despite its gallant efforts, the military is no replacement for civilian involvement and expertise.[52] Much like the State initiative to build a civilian response corps, the Government needs to develop a permanent, sizeable cadre of immediately deployable civilian experts with disparate skills to supplement or replace existing DOD efforts.[53] A robust civilian capability cannot help but reduce the military footprint in certain shaping and stability operations.[54] Not only would an enhanced civilian capability reduce the temptation to use the military as a first choice, but it also would have a positive impact on perceptions abroad.

While the recommendations proffered are not individually novel in and of themselves, they do represent a unique amalgamation of popular opinion presented within the context of the 3D security engagement concept as the next step in the revolution in military affairs that started with proactive peacetime engagement. Moreover, the solutions, though likely to be contentious in certain circles, are nonetheless easily achievable and, if implemented, could address perceptions of foreign policy militarization. **JFQ**

NOTES

[1] Statement of General James L. Jones, USMC, Commander, United States European Command, before the Senate Armed Services Committee, March 7, 2006, 12, available at <http://armed-services.senate.gov/statemnt/2006/March/Jones%20 03-07-06.pdf>.

[2] Anthony Lake and Christine Todd Whitman, *More than Humanitarianism: A Strategic U.S. Approach toward Africa*, Council on Foreign Relations Independent Task Force Report No. 56 (Washington, DC: Council on Foreign Relations, January 2006), 9.

[3] Ibid., 5.

[4] Ibid., 9–10.

[5] U.S. Department of State, "An Overview of President Bush's African Policy," July 11, 2003, available at <www.state.gov/p/af/rls/22364.htm>.

[6] U.S. Department of State, "Fact Sheet: U.S. and G8 Renew Strong Commitment to Africa," July 8, 2005, available at <www.state.gov/p/af/rls/75310.htm>.

[7] Sean McFate, "U.S. Africa Command: A New Strategic Paradigm?" *Military Review* (January-February 2008), 15.

[8] Robert G. Berschinski, *AFRICOM's Dilemma: The "Global War on Terrorism," "Capacity Building," Humanitarianism, and the Future of U.S. Security Policy in Africa* (Carlisle Barracks, PA: U.S. Army War College, Strategic Studies Institute, November 2007), 7.

[9] Ibid.

[10] Lauren Ploch, *Africa Command: U.S. Strategic Interests and the Role of the U.S. Military in Africa*, Congressional Research Service, Report RL34003, 4.

[11] Gregory J. Dyekman, *Security Cooperation: A Key to the Challenges of the 21st Century* (Carlisle Barracks, PA: U.S. Army War College, Strategic Studies Institute, November 2007), 1.

[12] Jones.

[13] Dyekman, 1.

[14] McFate, 16.

[15] Ibid., 16–17.

[16] Ploch, 5–6.

[17] Joint Publication (JP) 3–08, *Interagency, Intergovernmental Organization, and Nongovernmental Organization Coordination during Joint Operations,* volume I (Washington, DC: The Joint Staff, March 17, 2006), viii.

[18] Ibid., I–6.

[19] Berschinski, iii.

[20] Ibid., 6.

[21] Ibid., 7.

[22] Ploch, 6.

[23] Ibid.

[24] Clarence J. Bouchat, *An Introduction to Theater Strategy and Regional Security* (Carlisle Barracks, PA: U.S. Army War College, Strategic Studies Institute, August 2007), 6.

[25] Ibid.

[26] Dana Priest, "A Four-Star Foreign Policy?" *The Washington Post*, September 28, 2000, A1.

[27] U.S. Department of State, "U.S. Africa Command (AFRICOM) Update," June 22, 2007, available at <http://fpc.state.gov/fpc/87094.htm>.

[28] Dana Priest, *The Mission: Waging War and Keeping Peace with America's Military* (New York: Norton, 2004), 70.

[29] Priest, "A Four-Star Foreign Policy?"

[30] Priest, *The Mission*, 14.

[31] Tom Clancy, Tony Zinni, and Tony Koltz, *Battle Ready* (New York: Putnam, 2004), 319.

[32] Ibid.

[33] Priest, *The Mission*, 45.

[34] Priest, "A Four-Star Foreign Policy?"

[35] Clancy, Zinni, and Koltz, 319.

[36] Mitchell J. Thompson, "Breaking the Proconsulate: A New Design for National Power," *Parameters* 35, no. 4 (Winter 2005/2006), 64.

[37] Donna Miles, "Gates Assesses 'Soft,' 'Hard' Power Applications in Djibouti," American Forces Press Service, December 3, 2007, available at <www.defenselink.mil/news/newsarticle.aspx?id=48292>.

[38] Berschinski, 8.

[39] George W. Bush, *The National Security Strategy of the United States of America* (Washington, DC: The White House, March 2006), 37.

[40] U.S. Department of State, "Poor Governance a Threat to Democracy in Latin America, U.S. Says: Violence, Corruption, Weak Institutions Can Undermine Progress," May 25, 2005, accessed at <http://usinfo.state.gov/wh/Archive/2005/May/25-60682.html>.

[41] Ploch, 5.

[42] Lisa Schirch and Aaron Kishbaugh, "Leveraging '3-D' Security: From Rhetoric to Reality," *Foreign Policy in Focus* 11, no. 2 (November 15, 2006), 1.

[43] Jones.

[44] Michèle A. Flournoy and Shawn Brimley, "In Search of Harmony: Orchestrating 'The Interagency' for the Long War," *Armed Forces Journal* (July 2006), 36–39.

[45] Ibid.

[46] JP 3–08, vii.

[47] Flournoy and Brimley.

[48] Clark A. Murdock and Michèle A. Flournoy, "Creating a More Integrated and Effective National Security Apparatus," in *The Struggle Against Extremist Ideology: Addressing the Conditions That Foster Terrorism*, ed. Kent Hughes Butts and Jeffrey C. Reynolds (Carlisle Barracks, PA: U.S. Army War College, Center for Strategic Leadership, 2005), 88.

[49] Bouchat, 6.

[50] John E. Pulliam, *Lines on a Map: Regional Orientations and United States Interagency Cooperation*, Strategy Research Project (Carlisle Barracks, PA: U.S. Army War College, March 18, 2005), 12.

[51] JP 3–08, II–2.

[52] Robert M. Gates, "Beyond Guns and Steel: Reviving the Nonmilitary Instruments of American Power," *Military Review* (January-February 2008), 6.

[53] Ibid., 7.

[54] Ibid., 8.

Sailor trains Gabonese students assigned to USS *Fort McHenry*

U.S. Navy (R.J. Stratchko)

Legal Impediments to USAFRICOM Operationalization

By JEFFREY S. PALMER

Westerners have aggressive problem-solving minds; Africans experience people.

—Kenneth David Kaunda
President of Zambia, 1964–1991

With the creation of the newest regionally focused unified combatant command, questions arose about the ability of U.S. Africa Command (USAFRICOM) to attain full operationalization. Indeed, from a legal perspective, numerous challenges have yet to be resolved or addressed. This article considers those legal challenges by first examining USAFRICOM's articulated mission and organizational structure. Moreover, an analysis of the legal instruments that would enable full operationalization is necessary, as well as a candid assessment of any agreements currently in force. Integral to that assessment is the perspective of the intended beneficiaries of the command. Additionally, one must consider the fiscal laws and statutory constraints that may pose an impediment in realizing the stated mission of USAFRICOM. Finally, recommendations are offered. This essay demonstrates that absent substantial expansion of international agreements in the new command, coupled with significant revision to existing statutes, USAFRICOM is unlikely to have an impact beyond the status quo.

International Agreements

If one considers the broad mandate of USAFRICOM to contribute to the stability, security, health, and welfare of the regional institutions, nations, and people of Africa, the logical conclusion is that command personnel must operate, to some degree, *in* Africa. Whenever officials enter the sovereign territory of another nation, it is pursuant to some sort of legal authority.[1] Typically, the presence of foreign military personnel within the boundaries of a nation is governed by international agreement. The Department of Defense (DOD) defines *international agreements* as those agreements concluded with one or more foreign governments, signed by a U.S. representative, and sig-

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nifying intent of the parties to be bound under international law and denominated as an international agreement or other name connoting similar legal consequence.[2] These agreements may be in the form of either a treaty or an executive agreement, both having the same binding obligation under international law.[3] The distinction between the two relates to U.S. domestic law, as treaties require the advice and consent of the Senate, while executive agreements do not.[4] Among the forms that an executive agreement may take are a memorandum of agreement, exchange of notes, or agreed minute.[5] The selection of an executive agreement over a treaty may depend on whether the agreement, standing alone, can achieve its intended purpose or requires some implementing legislation.[6] By avoiding the Senate, the obvious appeal of the executive agreement, especially for DOD foreign military arrangements, should be apparent. DOD has concluded hundreds of executive agreements on matters of military cooperation, status arrangements, rights and privileges, facility use, and basing rights.[7]

Status of Forces Agreements. A crucial international agreement for American forces operating abroad is the Status of Forces Agreement (SOFA), which addresses the presence of military personnel in a foreign sovereign's territory and can be accomplished via executive agreement or treaty. One of the most comprehensive agreements in force is the North Atlantic Treaty Organization (NATO) SOFA, a multilateral treaty that covers the following matters: respect for laws of the host nation; exemption from passport/visa requirements; rules concerning driving; uniform wear in host country; guidelines for possession of arms; shared framework for criminal jurisdiction; limited immunity for civil jurisdiction; waiver or compensation formula for damages and liability; the provision of services (use of civilian local labor, financial, medical, postal); and personal tax and customs exemptions.[8] The utility and efficiency of this agreement are self-evident—signatory states' troops can train, organize, and equip, en masse, without the burdens of visa applications, weapons permits, import duties, foreign taxes, or foreign driving tests. The operational efficiency gained in having a smooth working relationship between sovereign states should not be underestimated. Yet as exhaustive as the NATO SOFA may seem, most member states have further refined their obligations through supplemental agreements.[9] Arguably, through these legal instruments, friendly forces are able to carry out their military missions with proper legal authority and clear understanding of respective rights and responsibilities. In many ways, a robust SOFA serves to facilitate military operations in a foreign setting.

If we consider the functionality of the SOFA in the context of USAFRICOM, we find a less than ideal arrangement. Among the states that comprise the command, fewer than one-third have some form of international agreement that addresses the presence of American forces in their country.[10] Thus, for the majority of countries in the USAFRICOM area of responsibility (AOR), U.S. military personnel have the same status as tourists—they are subject to visa requirements, customs restrictions, taxes, and all the laws of the host state. Note that states have no independent obligation to provide visitors with even basic due process rights. Essentially, absent specific legal authority, one enters and operates in a foreign setting at his own peril.

While it has been stated that large-scale deployments and bases are not part of the USAFRICOM vision,[11] the absence of SOFAs presents challenges to the flexibility and mobility of military personnel. The strategic implications should not be discounted or overlooked. Consider the following hypothetical scenario: a USAFRICOM training team wishes to develop a crisis response force composed of Eastern Africa nations. Without SOFAs, the movement of equipment, weapons, and personnel would be severely hampered by disparate entry requirements for each country. An initiative that could take several years to materialize under ideal circumstances could be protracted indefinitely if personnel, supplies, and equipment could not be moved with any degree of fluidity.

Of those SOFAs currently in force, most are arguably inadequate for the purposes of USAFRICOM. Almost all of these agreements are in the form of an "exchange of notes," which confers status equivalent to the administrative and technical (A&T) staff of the U.S. Embassy under the Vienna Convention on Diplomatic Relations. A SOFA conferring A&T status is inadequate for two reasons. The first is that such status provides military forces with a variety of diplomatic immunities, most significantly complete protection from the host state's criminal jurisdiction.[12] While the coverage or immunities provided for American forces seems operationally advantageous, it may be counterproductive. An agreement conferring A&T status does not authorize the presence of the force; rather, it affords the status only to those forces invited to enter the borders of the host nation. While a country facing catastrophe may allow foreign forces to enter under a grant of immunity, history indicates that those arrangements tend to be limited in duration.[13] The practical result of an A&T SOFA is that the U.S. military may be permitted to enter for only limited purposes and for short durations.[14] Essentially, if nations are hesitant to allow American forces to enter under a veil of diplomatic immunity, this may undermine USAFRICOM engagement strategy.

Secondly, the A&T SOFAs are arguably inadequate given their superficial nature, providing cursory treatment of multiple, complex subjects in a single sentence. Indeed, these executive agreements, usually reduced to a single page or two, incorporate a wide variety of subjects without much detail. While there is certainly no requirement under international law that all questions be addressed within the body of an agreement, the brevity of the A&T status agreement reflects its limited purpose. This type of A&T SOFA may be useful for touch-and-go military operations; however, it may not adequately address issues necessary for a robust USAFRICOM engagement. The failure of an A&T SOFA to address anticipated issues may create more disputes than it resolves. In fact, the historical experience of DOD suggests that foreign military engagements that encounter issues not addressed in a SOFA invariably lead to discord.[15]

The mosaic arrangement of USAFRICOM nations having either no SOFA (thus subjecting military guests to all laws and regulations of the host) or an A&T SOFA (which provides sweeping diplomatic immunities for military personnel) is a strategic impediment to operationalization. Without a SOFA, visiting forces are provided no protections—even for acts arising from the performance of official duties. Elsewhere, where there is an A&T SOFA in place, the broad immunities provided may discourage peacetime engagement. If one considers the legal theory underlying diplomatic immunity—that the person afforded the status is a personification of his sovereign[16] and thereby should be afforded privileges of the sovereign itself—one recognizes that this status, which has been promoted as a "serious long-term partnership,"[17] is clearly inappropriate for a military engagement with African nations. These one-sided agreements have little to do with partnership.

International Criminal Court. This potentially unworkable mosaic configuration for USAFRICOM is further complicated by the impact of the obligations due the International

Criminal Court (ICC). The ICC, as a permanent tribunal, exercises jurisdiction over individuals who are accused of crimes, including genocide, crimes against humanity, war crimes, and crimes of aggression.[18] To date, there are 105 parties to the Rome Statute.[19] Although the United States was originally a signatory, it subsequently refused to ratify the agreement, fearing the ICC could make Americans subject to baseless, politicized prosecutions.[20] In the wake of the establishment of the ICC, the United States embarked on a global campaign to secure assurances from the various nations that American military personnel would not be surrendered or extradited to the ICC.[21] These so-called nonsurrender agreements are pursued on the basis of the language of Article 98(2) of the Rome Statute: "The Court may not proceed with a request for surrender which would require the requested state to act inconsistently with its obligations under international agreements."[22]

Among USAFRICOM countries, there are 30 parties to the Rome Statute.[23] Parties to the statute who have simultaneously conferred complete immunity under an A&T SOFA could be in contradiction to their obligations under the Rome Statute not to deprive the ICC of its object and purpose.[24] This potential conflict raises a further deficiency in the use of A&T SOFAs for USAFRICOM. Furthermore, the American Servicemembers' Protection Act of 2002 (ASPA) impacts USAFRICOM parties to the Rome Statute.[25] Under ASPA, the United States is prohibited from providing military assistance to any state party to the Rome Statute, with limited exceptions for major allies (none of those enumerated being in Africa), those states that have accomplished a nonsurrender agreement, and those states specifically waived by the President.[26] The United States has concluded 39 nonsurrender agreements with USAFRICOM nations, including nonparties to the Rome Statute,[27] thus averting application of ASPA to some historic beneficiaries of military assistance. Nevertheless, the assortment of USAFRICOM states with varied obligations, entitlements, and SOFAs creates innumerable legal and logistic barriers to realistic engagement on a multinational scale.

Recommendation for Pan-African SOFA. One possible solution to this unworkable configuration of incongruent legal frameworks across the continent is the execution of a pan-African SOFA (PAFSOFA). This agreement could initially be accomplished on a regional basis, as an extension of the existing subregional capabilities identified by the African Union,[28] by incorporating reciprocal provisions for signatory states. The advantages to such an agreement should be obvious. Fluid movement of troops, equipment, and supplies would increase exponentially, while military operations would proceed without legal and regulatory hindrances that would otherwise impair or degrade mission accomplishment.

A pan-African SOFA would provide comprehensive coverage of rights and obligations for its contracting parties. It could be tailored either to the states belonging to the Economic Community of West African States (ECOWAS) or to other regional security arrangements, such as the Southern African Development Community or the East African Community. Since these states enjoy a working relationship by virtue of their regional organization, an agreement that builds on such an enduring relationship has a greater chance of success. Intergovernmental organizations such as ECOWAS possess what is known under international law as "international legal personality" to function on behalf of their member states.[29] Ultimately, agreements between regional groups, incorporating the terms of a PAFSOFA by reference, would provide the widest range of flexibility and operationalization on the continent. However, one may question what interests any African states or intergovernmental organizations would have in executing such an agreement.

The agreement could serve several state interests. First, it would be reciprocal. Thus, each signatory would be either the Sending State (that deploying forces) or the Receiving State (that hosting forces), providing flexibility among signatory states and their forces. This reciprocity allows African states an international agreement *as between* African states, creating the opportunity to cross borders when mutually agreed upon, not unlike the arrangement captured in the NATO SOFA. Indeed, if USAFRICOM seeks to promote African solutions to African problems, such an arrangement is ideal. The fact that the agreement is reciprocal with the United States also provides a certain amount of prestige that may serve as an inducement to member countries to sign, while the impact on the United States is fairly insignificant. The raw numbers of African military personnel invited to America annually are likely to remain minimal. Reciprocity is also consistent with concepts of partnership, emphasizing a sharing of "sovereign prerogatives"[30] between parties to a PAFSOFA. In lieu of the one-sided A&T SOFA, which affords the United States all the benefits at the expense of the hosting sovereign, a PAFSOFA would provide a more equitable jurisdictional framework that ensures basic due process and provides accountability to outside observers, possibly to include the ICC.[31] A PAFSOFA would manifest the frequently touted collaboration between the United States and African states, while vastly improving the operationalization of the command.

Critics may argue that a PAFSOFA would be rejected as proof that America is expanding its influence to secure oil interests.[32] Admittedly, negotiating a multinational agreement with diverse states pursuing competing interests and agendas is not a simple undertaking; it would take a Herculean effort. However, the alternative is status quo, a mosaic of incongruent international agreements obstructing the USAFRICOM mission. The enduring success of the NATO SOFA, binding together distinct sovereigns, cultures, and languages, should serve as inspiration to skeptics that such an agreement can be reached. Remarkably, the NATO SOFA took only 6 months to negotiate.[33] Key to the success of attaining consensus from envisioned partner states is not allowing the power-based arrogance that has historically undermined U.S. judgment in international relations to sour the process.[34] Critics may also argue that under a PAFSOFA, the United States would relinquish too much sovereignty when it acts as the Receiving State. However, it must be remembered that the United States asks fellow signatory nations to relinquish the same degree of sovereignty when its forces are present in their countries. The improbability of large-scale African forces deploying to the United States further undermines that argument. In sum, if USAFRICOM has a long-term interest in pan-African stabilization, building capability through partnership and conflict prevention, a robust multinational agreement that enables a full spectrum of military engagement is essential.

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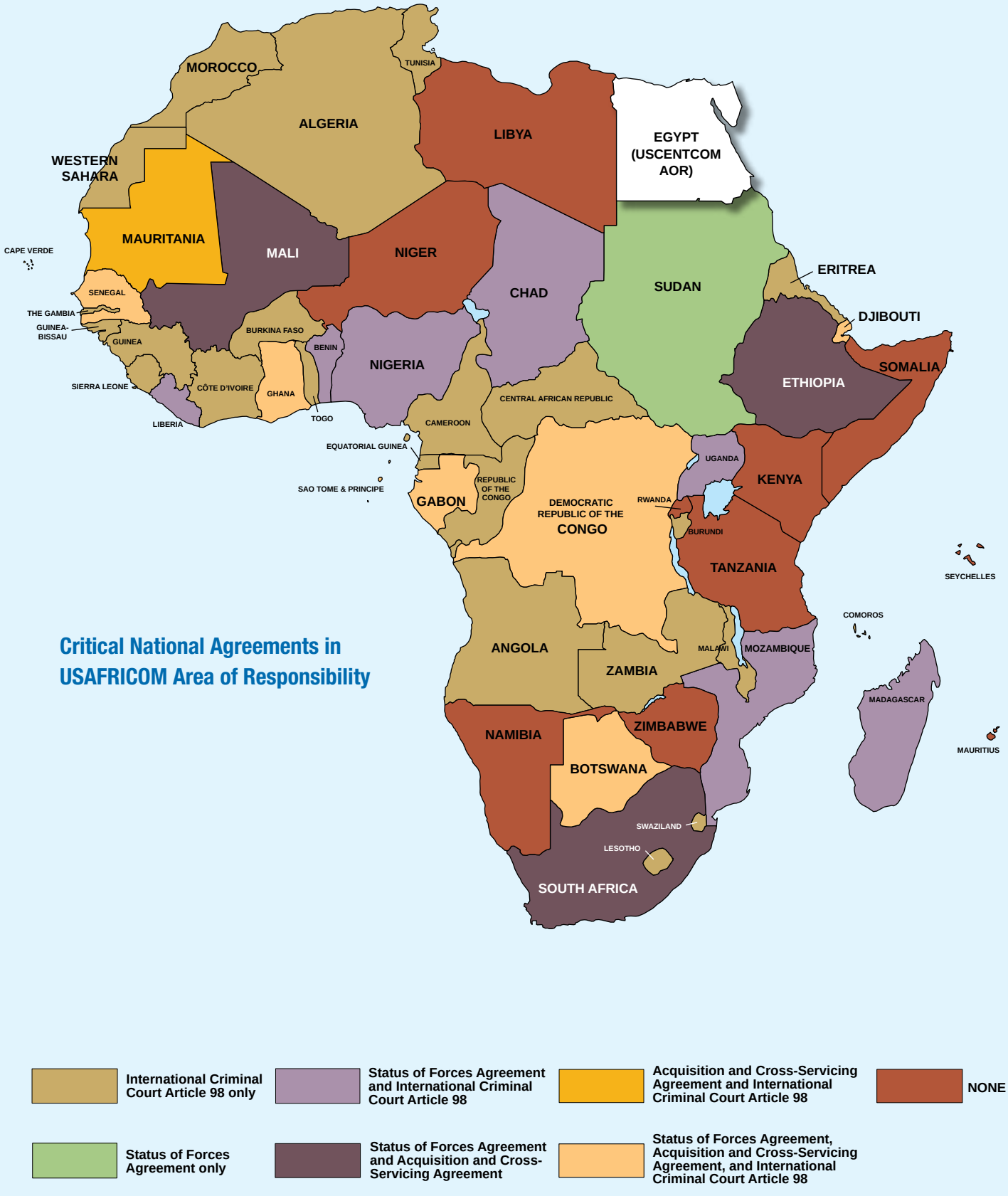
Acquisition and Cross-servicing Agreements

A collateral consideration to the need for comprehensive SOFAs in USAFRICOM is



Source: "Treaties in Force," Section 2: Bilateral Agreements, U.S. Department of State, April 10, 2007.

the requirement for an Acquisition and Cross-servicing Agreement (ACSA), which is also an international agreement. Its focus, however, is on logistics and resupply rights. The ACSA provides a mechanism to acquire, on a reciprocal basis, logistic support, supplies, and services between the parties to the agreement, usually on a cash basis, replacement-in-kind, or an equal value exchange. Highly flexible, the ACSA serves as a useful means for a deployed or transiting force to resupply without the usual DOD procurement bureaucracy. While there are some restraints, any country that has a SOFA with the United States is a candidate for an ACSA.[35]

Given the vast dimension of the USAFRICOM AOR, the usefulness and desirability of an ACSA should be apparent. In Africa, however, there are 11 ACSAs presently in force, thus providing coverage in less than 25 percent of the countries within the AOR.[36] As mentioned above, a SOFA is typically a prerequisite to the execution of an ACSA; thus, the imperative to increase SOFAs in USAFRICOM grows in significance. Without a robust constellation of ACSAs across the continent, forces will be further constrained in fluidity of movement. A routine training mission may require elaborate planning, supply prepositioning, or indirect routes in order to sustain a mission that otherwise would lack complexity. Arguably the inadequacy of SOFAs, and in turn ACSAs, will continue to hinder the full operationalization of USAFRICOM.

the enduring success of the NATO SOFA, binding together distinct sovereigns, cultures, and languages, should serve as inspiration to skeptics that an agreement can be reached

Fiscal Considerations

The USAFRICOM mission to partner with African states includes "directly contributing to the stability, security, health and welfare of the nations."[37] While this admirable goal should encourage potential beneficiaries, there are complex U.S. laws governing the expenditure of funds on foreign entities. Basic principles of fiscal law must be considered to comprehend the statutory framework in which USAFRICOM must operate. The legislative control most relevant to the command (and other military operations) is the Purpose Statute,[38] which provides that appropriations shall be applied only to objects for which the appropriations were made, except as otherwise provided by law. When considering whether an appropriation has been used for a proper purpose, a three-part test is applied. The test is essentially whether the expenditure is for a particular statutory purpose, whether the expenditure is prohibited by law, and whether the expenditure falls into some other category of appropriation.[39]

This proper purpose test has also been articulated by the Supreme Court to mean "the expenditure of funds is proper only when authorized by Congress" and, conversely, should never be construed to mean "unless prohibited by Congress."[40] In other words, USAFRICOM latitude over expenditure of appropriated funds is limited. The impact of this limitation is startling. For example, in fiscal year 2005, the commander of U.S. European Command (with most African nations within its AOR) controlled a paltry 3 percent of the discretionary theater security cooperation funding.[41] Creative deviations or workarounds to these constraints are ill advised, as activities improperly charged to one source of funds, where the appropriate fund charge is subsequently obligated, can lead to violations of the Anti-Deficiency Act, which carries criminal liabilities as its penalties.[42]

Use of Operations and Maintenance Funds. Most military operations are funded with operations and maintenance (O&M) appropriations, which provide for the routine expenses associated with operating an installation and those incurred during exercises, operations, and deployments as required. However, the use of O&M general purpose funds to benefit a foreign state or foreign military is not authorized; Congress has appropriated funds for foreign military assistance under the Foreign Assistance Act (FAA).[43] This prohibition includes training of foreign forces by DOD personnel, as articulated by the Comptroller General, in the investigation of Army misuse of O&M funds:

Training provided to Honduran troops during the exercise, although certainly related to exercise activities, was essentially the same as that ordinarily provided through security assistance, and consequently should have been funded as such: *security assistance funds are specifically provided by the Congress to be used to train the military forces of friendly foreign governments* [emphasis added].[44]

Naturally, there are exceptions to the prohibition of O&M for military assistance, such as the joint combined exchange training (JCET) conducted by special operations forces. While this program may seem ideal for USAFRICOM militaries, it is far from unencumbered. The JCET has the "primary purpose" of training the special operations forces of the combatant command.[45] Thus, in the eyes of Congress, the foreign military receiving training is an incidental beneficiary of the JCET. The needs of a USAFRICOM nation are therefore not central to authorizing a JCET.

Additionally, there are constraints placed on the use of these appropriations for civic and humanitarian activities. Humanitarian assistance is carried out under the FAA, rather than O&M funding.[46] All FAA funds, under Title 22, are controlled by the Department of State, although DOD may execute some FAA programs. Congress has recognized the utility of DOD-sponsored humanitarian and civic assistance (HCA) and provided limited statutory authority for appropriated HCA: transportation of relief supplies, humanitarian demining, foreign disaster assistance, and transfer of excess nonlethal supplies.[47] However, this statutory authority also has limitations that hinder the stated USAFRICOM mission.

Funding Humanitarian and Civic Assistance. The HCA authorizations, collectively referred to as Overseas Humanitarian, Disaster, and Civic Aid (OHDACA), have specific criteria that must be met prior to the expenditure of earmarked funds:

- expenditures are in conjunction with military operations/exercises
- specific U.S. operational readiness skills are promoted
- labor is performed by the American military
- other U.S. efforts are complemented, not duplicated
- it is approved by the Secretary of State.[48]

The Secretary of Defense has decreed that the DOD humanitarian assistance "role must not be reduced to simply providing resources or writing checks."[49] These efforts are validated by the Defense Security Cooperation Agency, which allocates the funds for combatant command execution.[50] Not only will USAFRICOM be subject to meeting the above criteria before undertaking an OHDACA project, but it will also face limitations on the nature of HCA provided.

The types of HCA that may be carried out in conjunction with military operations are

rural medical, dental, and veterinary care; construction of rudimentary surface transportation systems; well-drilling and construction of basic sanitation facilities; and rudimentary construction/repair of public facilities.[51] Additionally, it should be noted that only funds specifically earmarked for OHDACA may be used for OHDACA programs, as traditional O&M is prohibited for use, absent minimal expenditures for incidental costs. The total earmarked funds for OHDACA projects are minor, considering the spectrum of global DOD operations. For example, in fiscal year 2007, the OHDACA budget was about $62 million, only $40 million of which was allocated to HCA.[52] Thus, the USAFRICOM HCA mission will be constrained by the portion of the overall OHDACA budget they can leverage. Once this portion is secured, it will also be limited to specific activities within the parameters of overall guidance.

Additional Funding Sources. Despite the limitations on O&M expenditures for training and humanitarian assistance, several other significant statutory mechanisms will enable the USAFRICOM mission in varying degrees. The long-term implications of these mechanisms on the mission are difficult to assess. Admittedly, these programs have been administered in Africa by predecessor combatant commands with varied emphasis, despite the constraints that accompany them for decades in some cases. However, these projects or engagements were allocated lower priorities (and on a fairly small scale) by those warfighting commands. Of course, these types of programs are the primary focus of USAFRICOM rather than a tangential pursuit. Under existing statutory provisions, USAFRICOM will be impeded by both specific parameters of the programs and the competition for scarce resources among the commands. Furthermore, USAFRICOM lacks ownership over many engagement programs central to its mission.

USAFRICOM latitude over expenditure of appropriated funds is limited

Finally, the fiscal law constraints that limit specific sources of appropriation for specific purposes also apply to the multiagency structure proposed for USAFRICOM. Obviously State, Commerce, U.S. Agency for International Development, or Treasury employees are not DOD employees. Personnel from these agencies are funded through their own appropriation, pursuing their specific authorizations. Rules governing pooling resources are remarkably rigid, as Congress mandates that funds cannot augment "any bureau or agency beyond that contained in its respective appropriation."[53] USAFRICOM presents challenges, as each agency must reconcile its funding and mandates when collaborating. Indeed, the U.S. European Command commander has acknowledged that it "will be difficult to get subscription and participation by the interagency."[54]

Recommendation for USAFRICOM Enabling Legislation. The USAFRICOM mission can only be accomplished through meaningful engagements, whether in the form of training, humanitarian assistance, or supply of equipment and materials. Interface with militaries and populations in the AOR is central. The unique mission of the command clearly distinguishes it from the other geographic combatant commands. Accordingly, it deserves specific enabling legislation to legitimize, empower, and fund its operations.

Akin to the congressional establishment of U.S. Special Operations Command, USAFRICOM must be chartered to pursue a nontraditional agenda. While it is possible that operations might continue on the same scale as previous years, using existing funding regimens to execute a piecemeal engagement strategy can only be a short-term solution. Indeed, to realize a continent-wide goal of stability, conflict prevention, economic prosperity, suppression of terrorism, and fostering of respect for human dignity, specific legislation must be enacted to empower this command. Failure to provide the statutory mechanisms to carry out its mission will leave the command hamstrung, in need of funds, limited in effect, and lacking credibility.

When one considers the broad mandate of U.S. Africa Command,[55] one recognizes that the Department of Defense has made a serious departure from the historic role of the geographic combatant commander. The creation of this command is more than the paper transfer of areas of responsibility from the rosters of other commands; it marks a major shift in military function away from kinetic operations and toward capability-building via strategic engagement. Yet while the command sprints toward full operationalization, the realities of the operating environment appear overlooked. One finds a fragmented international agreement framework that, although satisfactory for the previous combatant commands, undermines the flexibility in engagement that is the raison d' être of U.S. Africa Command. The limited existing framework lacks parity among sovereign states. Clearly, a concerted effort by Defense, with State approval, to negotiate and conclude comprehensive Status of Forces and Acquisition and Cross-servicing Agreements will facilitate long-term USAFRICOM strategic objectives. Additionally, while the command hopes to fully engage its African partners, its fiscal hands are tied. A statutory regime that strictly limits the U.S. military contribution to stability, security, health, and welfare is unworkable. Authority for these efforts must be vested in the commander, using specifically appropriated funding. Accordingly, legislation that validates the nontraditional role of USAFRICOM should be favorably considered by Congress.

A combatant command that cannot effectively execute its stated mission or fund its operations might as well relinquish its area of responsibility to the previously responsible combatant commanders. Absent substantive revision of laws and pronounced expansion of the framework of international agreements, USAFRICOM will offer nothing beyond the status quo legacy of its predecessors. Failure to deliver what is currently being represented will do little to foster rapport and may actually undermine U.S.-Africa relations. The United States holds a rare opportunity to effect posi-

U.S. Navy (Brian A. Goyak)

Marine instructs Ghanaian soldier in martial arts

tive change in the world while simultaneously enhancing its national security interests. The opportunity should not be lost through collective inaction. **JFQ**

NOTES

[1] Arthur Bredemeyer, "International Agreements: A Primer for the Deploying Judge Advocate," *Air Force Law Review* 42 (1997), 102.

[2] Department of Defense (DOD) Directive 5530.3, "International Agreements," encl. 2, June 11, 1987.

[3] Richard J. Erickson, "The Making of Executive Agreements by the United States Department of Defense: An Agenda for Progress," *Boston University International Law Journal* 13 (Spring 1995), 46.

[4] The Case-Zeblocki Act of 1972, however, requires that executive agreements be reported to Congress within 60 days of conclusion.

[5] Vienna Convention on the Law of Treaties, United Nations, *Treaty Series* 1155 (May 23, 1969), 331.

[6] Erickson, "The Making of Executive Agreements," 47.

[7] Ibid., 45.

[8] "NATO Status of Forces Agreement," *United States Treaties and Other International Agreements*, vol. 4 (Washington, DC: U.S. Government Printing Office, 1953), 1792.

[9] See "Agreement to Supplement the NATO SOFA w/r/t Foreign Forces stationed in the Federal Republic of Germany," *United States Treaties and Other International Agreements*, vol. 1 (Washington, DC: U.S. Government Printing Office, 1959), 531; and the "Agreement on Friendship, Defense and Cooperation, with Complimentary Agreements and Exchange of Notes," U.S.-Spain, *Treaties & International Agreements Service* (1982), 10589.

[10] U.S. Department of State, *Treaties in Force*, Section 2: Multilateral Agreements, April 10, 2007, indicates that there are 18 international agreements with countries in Africa. These agreements govern the U.S. military presence in these countries.

[11] Elizabeth Blunt, "Uncertainty over U.S. Africa Force," BBC News, November 8, 2007, available at <http://news.bbc.co.uk/2/hi/africa/7085775.stm>.

[12] Article 37(2), Vienna Convention on Diplomatic Relations, *United States Treaties and Other International Agreements* vol. 22 (Washington, DC: U.S. Government Printing Office, 1961), 3227.

[13] John W. Egan, "The Future of Criminal Jurisdiction over the Deployed American Soldier: Four Major Trends in Bilateral U.S. Status of Forces Agreements," *Emory International Law Review* 20 (Spring 2006), 341.

[14] Bredemeyer, 105.

[15] Richard J. Erickson, "Status of Forces Agreements: A Sharing of Sovereign Prerogative," *Air Force Law Review* 37 (1994), 140.

[16] Michael McDonough, "Privileged Outlaws: Diplomats, Crime and Immunity," *Suffolk Transnational Law Review* 20 (Summer 1997), 486.

[17] Theresa Whelan, "Why AFRICOM? An American Perspective," Situation Report, Institute for Security Studies, August 17, 2007, 8.

[18] Rome Statute of the International Criminal Court, Article 5(1)(a)-(d), available at <www.icc-cpi.int/library/about/officialjournal/Rome_Statute_English.pdf>.

[19] International Criminal Court, Assembly of States Parties, "The States Parties to the Rome Statute," available at <http://www.icc-cpi.int/asp/statesparties.html>.

[20] Thomas Franck and Stephan Yuhan, "The United States and the International Criminal Court: Unilateralism Rampant," *New York University Journal of International Law & Politics* 35 (Spring 2003), 520.

[21] Chet J. Tan, "The Proliferation of Non-Surrender Agreements among Non-Ratifiers of the Rome Statute of the International Criminal Court," *American University International Law Review* 19 (2004), 1118.

[22] Rome Statute, Article 98(2), 75.

[23] International Criminal Court, Assembly of States Parties, "African States," available at <http://www.icc-cpi.int/region&id=3.html>.

[24] Tan, 1149.

[25] American Servicemembers Protection Act, Public Law 107–206, 116 Stat 899 (2002), 81–91, available at <http://history.nih.gov/01docs/historical/documents/PL107-206.pdf>.

[26] Ibid., Section 2007 (a)-(d).

[27] U.S. Department of State, *Treaties in Force*, Section 2: Multilateral Agreements, indicates that there are 39 international agreements with countries in Africa that relate to extradition of U.S. personnel to the ICC. It is not without significance that countries that may be perceived as power brokers on the African continent, including South Africa, Ethiopia, Kenya, and Mali, have not concluded a nonsurrender agreement with the United States.

[28] African Union, Policy Framework for the Establishment of the African Standby Force and Military Staff Committee, part II annexes (May 15–16, 2003), 16.

[29] Thomas Burgenthal and Harold Maier, *Public International Law*, 2d ed. (St. Paul, MN: West Publishing Company, 1990), 36.

[30] Erickson, "Status of Forces Agreements," 140.

[31] A growing body of commentators argues that the international agreements referred to in Article 98(2) of the Rome Statute are SOFAs. See Tan, 1136.

[32] "West African Military Heads Denounce U.S. Approach to Africa Command," *International Herald Tribune*, November 7, 2007.

[33] Mette Prasse Hartov, "NATO Status of Forces and a Suggestion for the Scope of Application," *Baltic Defense Review* 2, no. 10 (2003), 49.

[34] Jaime Gher, "Status of Forces Agreements: Tools to Further Effective Foreign Policy and Lessons to be Learned from the United States–Japan Agreement," *University of San Francisco Law Review* 37 (Fall 2002), 253.

[35] DOD Directive 2010.9, "Acquisition and Cross-Servicing Agreements," April 28, 2003, Section 4.2.1.3.4.

[36] Countries that the United States has concluded an ACSA with include Botswana, Democratic Republic of Congo, Djibouti, Ethiopia, Gabon, Ghana, Mali, Mauritania, Rwanda, Senegal, and South Africa. See *Treaties in Force*, Section 2: Multilateral Agreements.

[37] U.S. Africa Command Public Affairs and International Outreach, "USAFRICOM Dialogue by General William 'Kip' Ward, Commander," December 27, 2007, available at <www.africom.mil/africomDialogue.asp>.

[38] Title 31, U.S. Code, Section 1301(a).

[39] See Bill Alexander, B–213137, *Comptroller General Opinions* 63 (1984), 422.

[40] *United States v. MacCollom*, *U.S. Reporter* 426 (1976), 317.

[41] Thomas P. Galvin, "Extending the Phase Zero Campaign Mindset," *Joint Force Quarterly* 45 (2d Quarter 2007), 50.

[42] Title 31, U.S. Code, Section 1341(a).

[43] Title 22, U.S. Code, Section 2301.

[44] Alexander, 442.

[45] Title 10, U.S. Code, Section 2011b.

[46] Title 22, U.S. Code, Section 2151.

[47] Title 10, U.S. Code, Sections 401, 402, 404, 2557, and 2561.

[48] Title 10, U.S. Code, Section 401(a)-(b).

[49] Message, R25168Z February 2004, Secretary of Defense, "Policy and Program Guidance for FY05 Overseas Humanitarian, Disaster and Civic Aid (OHDACA) Activities and Humanitarian and Civic Assistance (HCA)."

[50] DOD Manual 5105.38M, "Security Assistance Management Manual," fig. C12.F1, Humanitarian Assistance Programs.

[51] DOD Directive 2205.2, "Humanitarian and Civic Assistance (HCA) Provided in Conjunction with Military Operations," sec. E.1.1.2, October 6, 1994.

[52] Defense Security Cooperation Agency, "Overseas Humanitarian Disaster and Civic Aid (OHDACA), Operation and Maintenance, Defense-wide Fiscal Year (FY) 2007 Budget Estimate Submission," available at <www.dsca.osd.mil/programs/HA/new/OHDACA%20FY%202007%20Budget%20Estimate.pdf>.

[53] Matter of Use of Agencies' Appropriations to Purchase Computer Hardware for Department of Labor's Executive Computer Network, B–238024, *Comptroller General Opinions* 70 (1991).

[54] Lauren Ploch, *Africa Command: U.S. Strategic Interests and the Role of the U.S. Military in Africa*, Congressional Research Service Report RL34003, July 6, 2007, 23.

[55] Advance questions for General William E. Ward, USA, nominee for Commander, U.S. Africa Command, Senate Armed Services Committee, September 27, 2007, 5.

The NDU Foundation *Congratulates the* **Winners** *of the* 2008 Writing Competitions!

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"Integrating Constructive and Destructive Power: Towards a New Paradigm for National Security Strategy-making and Interagency Action"

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Best Interagency Dialogue Article
MAJ Miemie Winn Byrd, USAR
"Combating Terrorism with Socioeconomics: Leveraging the Private Sector"

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Mark Moyar, Marine Corps University
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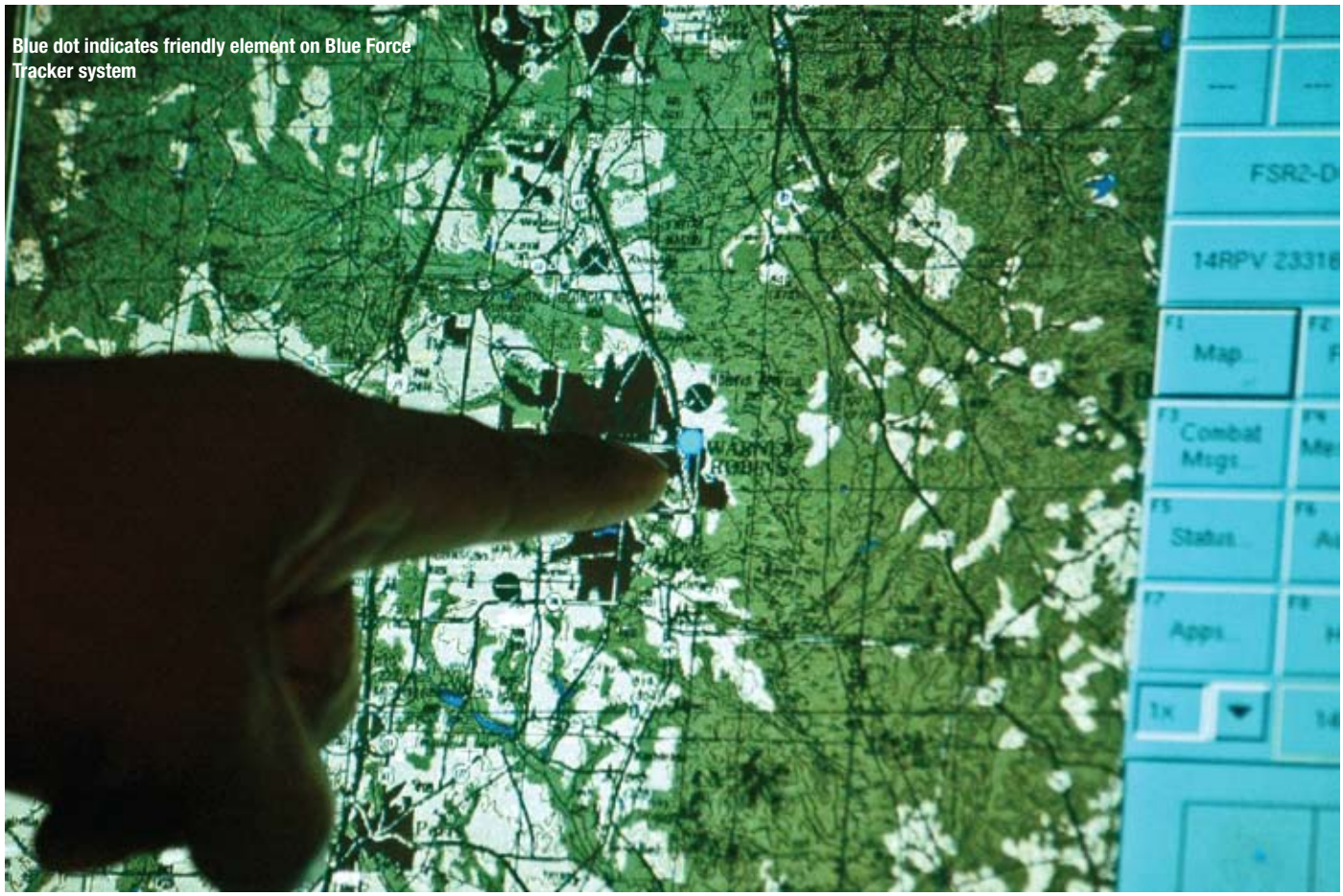

U.S. Air Force (Sue Sapp)

The Global Positioning System
A Case Study in the Challenges of Transformation

By MATTHEW E. SKEEN

U.S. Army

Soldier carries backpack-sized component of early global positioning system, 1981

The Navigation Satellite Timing and Ranging (NAVSTAR) Global Positioning System (GPS) is one of very few modern innovations that can legitimately claim the overused title "transformational." Like electricity, GPS technology and GPS-derived information are now ubiquitous. This satellite-based system enables a diverse array of capabilities ranging from online driving directions to computer networking to political gerrymandering.

GPS technology is equally pervasive within the military, where it creates efficiencies and enhances tactics, techniques, and procedures (TTPs) in every warfighting domain. Indeed, the merits of GPS seem obvious, but they were not so clear at many key decision points in the program. In fact, the 48-year history of satellite navigation provides an excellent case study in the challenges associated with Department of Defense (DOD) transformation.

This essay focuses on four specific periods in GPS history that provide clear lessons for those individuals leading transformation. In the first two periods, the contrast between the strong leadership that spurred the decision to formally start the GPS program and the lackluster leadership that later encouraged a congressional committee to recommend terminating it demonstrates the essential importance of visionary leadership in the higher levels of DOD. Next, an examination of an operational success and a missed opportunity in Operation *Desert Storm* highlights the benefit of

Lieutenant Colonel Matthew E. Skeen, USAF, wrote this essay while a student at the National War College. It won the 2008 Secretary of Defense Transformation Essay Competition.

harnessing the creativity of our Soldiers, Sailors, Marines, and Airmen in the field to accelerate transformation. Finally, a brief consideration of GPS today provides a clear reminder that effective transformation does not shift our forces from one technology to another, but rather creates an organization that is able to stay ahead of adversaries who use the tools of our globalized world to counter our strengths.

1973 DSARC

In December 1973, the GPS program passed through its first major obstacle when the Defense Systems Acquisition Review Council (DSARC) approved entry into Phase I of development.[1] This decision was forged from competing organizational interests both in the Services and the Office of the Secretary of Defense (OSD). The decision was also affected by other elements of the domestic context including the preferences of engineers, precedents set by research programs, process changes driven by the war in Vietnam, and a chance meeting between a new political appointee and an Air Force colonel. In the end, strong leadership was essential to overcoming the inertia imposed by competing forces.

The Navy became the first Service to stake a claim in the satellite navigation business in the earliest days of the space age. When the Russians launched Sputnik in 1957, researchers at The Johns Hopkins University Applied Physics Laboratory began tracking the satellite by measuring its radio broadcasts.[2] These researchers then proposed that the Navy reverse this process to use satellite broadcasts to help submarines locate themselves.[3] On April 13, 1960, less than 3 years after the Sputnik launch, the Navy launched the first Transit navigation satellite to test this theory.[4] In 1964, the Naval Research Laboratory conceived another satellite navigation concept based on highly accurate clocks.[5] This concept developed into the Timation program that launched its first satellite in 1967. These successful programs set the precedent for the Navy to operate satellite navigation systems. They also reinforced the Service's natural preferences to avoid relying on other Services and to field systems optimized to meet Navy-specific needs. Furthermore, the researchers who devoted years to perfecting the systems developed strong personal preferences for their concepts.

In parallel with the Navy, the Air Force and Army joined the game with different satellite navigation concepts. The Air Force initiated Project 621B in 1963 to evolve a concept based on a pseudorandom noise signal.[6] This concept was tested using balloons to simulate satellites.[7] The Army operated 16 sequential-correlation-of-range satellites between 1964 and 1970 using its own technical concept.[8] Similar to the Navy programs, these programs set the precedents for Service-specific systems and fostered each player's preference for its own technological concept.

The Services may have continued their separate programs if not for the advent of a fourth major player with the power to force a change: the Director of Defense Research and Engineering (DDR&E), Malcolm Currie.[9] The DDR&E chaired the DSARC, which had been established by OSD in 1969 as congressional dissatisfaction with the war in Vietnam began increasing the pressure to reduce defense spending.[10] In April 1973, the Deputy Secretary of Defense directed the Services to form a joint program office, led by the Air Force, to develop a single navigation satellite system meeting all three sets of Service requirements.[11] As head of the DSARC, Dr. Currie was the ultimate approval authority for the acquisition plan. While the Services participated in the DSARC and could effectively veto a plan that did not meet their needs, only Currie had approval power. His objective was to meet the Services' needs while avoiding costly duplication of effort.

the Services may have continued their separate programs if not for the advent of the Director of Defense Research and Engineering

The Air Force's first attempt to establish a joint program failed; the Service attempted to substitute its own program for the joint program. After receiving direction to form a joint program office, the Air Force converted its Project 621B Program Office into the new Defense Navigation Satellite System Program Office under the command of Colonel Brad Parkinson.[12] In August 1973, the DSARC met and disapproved Parkinson's proposed plan for the joint program because it was essentially a repackaged version of Air Force Project 621B.[13] The Army and Navy representatives at the DSARC blocked the plan. After the meeting, Currie met with Parkinson and told him, "Brad, don't worry about it. You can get this right. What I want you to do is go back and make your program a joint program."[14]

Currie's solid support for satellite navigation may have resulted from a chance meeting with Parkinson a few months earlier. The two met soon after Currie was appointed to his position as DDR&E in the second term of the Nixon administration. Currie was traveling regularly between Washington, DC, and Los Angeles, visiting the Air Force Space and Missile Systems Organization in El Segundo, California. On one visit, Parkinson spent 4 hours explaining the need for a satellite navigation program and his plan to create it. Parkinson's argument must have been persuasive because Currie "exited with a view that he wanted to do this,"[15] attesting to the important role that individuals have in transformation.

After failing to gain approval in his first attempt, Parkinson developed a new proposal including the best features of each of the Service programs. He held a meeting at the Pentagon over Labor Day weekend to synthesize a new program, which incorporated Transit's orbit determination, Timation's precise clocks, and a revised version of the Air Force pseudorandom noise signal.[16] This program even included a plan to use the Army's Yuma Proving Ground as one of the primary test sites.[17] Essentially, this program laid out GPS as it exists today.

The plan was approved by the DSARC in December 1973 because it mitigated the concerns that led the Services to veto the previous plan. The Services were convinced that at least some elements of their original programs were incorporated into the new system. The personal interests of the individual Service researchers were addressed in the Labor Day meeting, where the best elements of each system were synthesized. This synthesis also addressed the Services' preferences for technology optimized to meet their individual needs. Finally, the DDR&E was able to comply with his mandate to eliminate duplication of effort while fielding a system he felt would provide significant benefit.

This study demonstrates some major bureaucratic challenges that continue to make transformation difficult today. There were communities within each Service that saw the potential for satellite navigation to transform their operations, but the Navy and Air Force each wanted to control the program. This sort of tension is natural for three reasons. First, each Service wanted to optimize the system for

its own mission set. Second, each Service had already invested time and money to develop a solution. Finally, neither Service wanted to depend on an outside organization to provide a mission-essential service. DOD was facing declining budgets and had established the DSARC process to work through disputes such as this, but the process was not going to enable transformation. In fact, the failure of the August 1973 DSARC proves that bureaucratic players can use such processes to slow it. In examining these challenges, it is easy to find parallels between the early GPS debate and today's discussions about unmanned aircraft systems or cyberspace operations. In 1973, leadership was the key to overcoming these challenges.

Currie and Parkinson provided the leadership required to maneuver the GPS program around the bureaucratic roadblocks. They had not only the vision to see the value of GPS, but also the ability to see their own biases and the courage to make decisions in the face of opposition. Parkinson envisioned the transformational benefits of precision satellite navigation and seized an unexpected opportunity to share that vision with Currie, who recognized the potential value of the mission. But Currie did not attempt to force the Air Force concept on the other Services. He knew that each Service had valid reasons for advocating its concept and that each Service's needs had to be addressed in the final solution. At the August DSARC, Currie directed Parkinson to create a truly joint program to achieve that final solution. Currie's visionary leadership accounted for both the technical issues and the bureaucratic issues inherent in any decision of this magnitude. Without Currie's hands-on leadership, the bureaucratic processes could have sustained the disputes between the Services for years. Almost a decade later, the debate over the annual defense authorization would make evident the negative impact when visionary leadership falters and the bureaucratic processes begin to dominate the discussion.

FY82 Defense Authorization

In contrast to the visionary leadership guiding the 1973 DSARC, the lead-up to the fiscal year (FY) 1982 Defense Authorization demonstrates the potential consequences of lackluster leadership. After reviewing the President's proposed budget, the Senate Armed Services Committee (SASC) funded the GPS program, but the House Armed Services Committee (HASC) recommended terminating it. Like the 1973 DSARC decision, this decision was affected by the domestic context. In particular, the Air Staff's weak support for the program created opportunities for General Accounting Office (GAO) analysts both to frame the debate in terms they preferred and later to exploit an unexpected change in HASC membership to target the program. During this period, the GPS transformation faltered because the GAO framed the issue narrowly in terms of costs and benefits associated with replacing several existing navigation systems with a slightly more accurate one. The GAO did not assess the benefits of visionary new applications like GPS-guided munitions, GPS-enabled survival radios, or the computerized GPS navigators in many cars today.

The GPS program had made significant progress between the 1973 DSARC decision and the FY82 budget debate in the fall of 1981, but the program also experienced problems. Six prototype satellites had been launched and preliminary test results exceeded the technical performance requirements. However, the program was running over budget and falling behind schedule. The forecasted initial operational capability date slipped from 1984 to 1986, and the cost of the work between the 1973 DSARC and the next DSARC in 1979 ballooned beyond the original estimate of $178 million to over $400 million.[18] In spite of the cost and schedule problems, the 1979 DSARC approved the start of full-scale development.

Currie and Parkinson had not only the vision to see the value of GPS, but also the ability to see their own biases and make decisions in the face of opposition

During this same period, the Air Force weakened the program by failing to provide adequate funding. As defense budgets declined in the late 1970s, the Air Force repeatedly tried to cut GPS funding.[19] There were two likely motivations for these cuts. On one hand, it is possible the Air Staff could not envision the true potential of the GPS transformation. Like the GAO analysts, the Air Staff may have seen GPS as just a replacement for existing navigation systems and judged that other initiatives would provide more bang for the buck. On the other hand, the Air Staff may have understood that there would be significant benefits across all the Services, but believed the Air Force was being forced to pay more than its fair share of the cost. In this case, cutting the funding was a ploy to get OSD to increase the Air Force budget to fund the difference. Neither of these perspectives provides an example of the visionary leadership needed for successful transformation because the proposed cuts weakened congressional support for the program. Prior to the FY82 budget debate, the GAO further weakened HASC support for GPS by publishing three skeptical assessments of the program.

The first report was issued in 1977 and criticized the GPS program for failing to follow established procedures. The major findings centered on the fact that the user community had not formally established its need for a new capability and set the acceptable cost and schedule limits for fielding that capability before the GPS program was initiated at the 1973 DSARC.[20] The report also indicated the DSARC had selected a satellite-based solution for its navigation needs without first studying alternative ways to meet those needs.[21] This report essentially staked out the positions that there might not be a valid need for improved navigation capability, and, if there was a need, GPS might not be the most cost-effective way to meet it. In the minds of the GAO analysts, this failure seriously called into question the decision to build the system.

The second report criticized the cost and schedule performance of the program and restated concern about the benefit of the system relative to cost. The report noted that "much uncertainty currently exists concerning who the individual users will be and what their specific needs are."[22] The report went on to state, "We are concerned that unless the uncertainties pertaining to improved force effectiveness and potential cost savings are resolved, the soundness of the pending [DSARC] decision to proceed with GPS development could be jeopardized."[23] It further noted that the Under Secretary of Defense for Research and Engineering (formerly known as the DDR&E) had testified to the Senate Commerce, Science, and Transportation Subcommittee that GPS could save the Nation $200 million per year, but that DOD was unable to provide documents as evidence for this testimony.[24] This report's concern that GAO was unable to verify the DOD claim that there would be 27,000 military users reflects the previous report's concern about the failure to follow established procedures. This concern is obvious in the statement that "this inability to track individual users reflects the origin of the program; i.e., unmet needs and identified deficiencies of specific individual users were

not the driving force behind the program being initiated."[25] In short, this second report clearly framed the debate in terms of identifying existing users who would switch to GPS navigation and the mission benefit increased navigation accuracy would provide to those users. There was no attempt to assess the benefits of transformational new applications of the system.

The third GAO report focused more on the benefits of the system relative to its costs. The GAO and DOD finally agreed on a projected cost of $8.6 billion through the year 2000.[26] The two organizations also agreed that there would be at least 14,000 users by 2000 and that the system would provide improved military effectiveness.[27] For example, DOD studies calculated that 1,465 GPS-equipped aircraft could destroy the same number of fixed targets as 1,714 aircraft without GPS. They then calculated that the cost of the additional 249 aircraft would exceed $7 billion. If the system cost $8.6 billion and achieved $7 billion in benefit in this scenario and more benefit in other scenarios, it might be a good investment. From today's perspective, this was a narrow assessment of the benefit of GPS.

Without visionary leadership, the bureaucratic process will default to conservative positions. In this case, the fact that DOD did not follow the procedure of documenting the unmet need before the program was established raised a red flag for the GAO. This failure may have resulted from Currie's personal support for the program—he shared the program office's transformational vision. However, this challenge is likely to be faced by any transformational program because users may lack the vision to see the potential benefits. GAO concerns about this process deviation were amplified by the fact that the program failed to provide hard data on the number of users. Future transformational programs are also likely to face this problem because users are simply reluctant to commit to adopting a revolutionary new technology before it is proven. In this period of GPS history, conservative bureaucratic processes were able to frame the debate narrowly because the Air Staff failed to provide visionary leadership for the program. The GAO's critical assessments would not have impacted the program if the membership of the HASC had not changed unexpectedly.

The domestic political environment following the 1980 elections set the stage for the HASC to recommend terminating the program. The key change was Representative Charles Wilson's (D–CA) departure from the committee.[28] Wilson represented California's 31st district in the suburbs of Los Angeles, had been a member of Congress since 1962, and was a senior member of the HASC majority. The 31st district was solidly Democratic, and Wilson would likely have been reelected had he not drawn attention to himself. However, he lost the Democratic primary in 1980 after being censured by the House for lying about a cash gift he received from Tongsun Park, who was working for the South Korean central intelligence agency.[29] The economy of Wilson's district was heavily reliant on the defense plants around it, including Rockwell International's Seal Beach GPS factory. If Wilson had still been a member of the committee, GAO concerns about GPS would have fallen on deaf ears.

Without Representative Wilson championing GPS, power shifted to committee staffers who were influenced by the GAO assessments. Citing many of the issues raised in the GAO reports and concerns about the "large out-year mortgages" developing in DOD programs, the HASC report recommended terminating GPS, stating, "The price tag is far too high for the additional capability it would ultimately provide."[30] However, the program was not terminated because the SASC remained supportive during this first year of the Reagan defense buildup. The defense authorization that was finally signed into law removed $100 million of the President's requested $400 million, but it more closely matched the SASC support for the system than the HASC skepticism.[31]

The events surrounding the FY82 Defense Authorization show that without visionary leadership at high levels within the Services and OSD, transformation may fail as competing priorities draw away needed resources. This study also affirms the element of chance that people bring to the decision-making process. Just as the chance meeting between Parkinson and Currie affected the 1973 DSARC decision, the unexpected departure of a solid political backer affected HASC support.

The Gulf War

Operation *Desert Storm* is often described as the "first space war" in large part because of the role GPS played in the conflict. In a comprehensive after-action report on the war to Congress, DOD consistently praised the benefits of GPS and recommended that it be considered for incorporation in all weapons systems and platforms.[32] One reason for the

the second report criticized the cost and schedule performance of the program and restated concern about the benefit of the system relative to cost

Marines patrolling in Anbar Province check global positioning system

U.S. Marine Corps, Regimental Combat Team 5 (William Skelton)

success of GPS was the ability of American troops to quickly develop tactics to exploit this emerging technology. A brief examination of one operational success and a missed opportunity for GPS in this conflict highlights the benefit of harnessing the creativity of troops in the field to accelerate transformation and suggests that we should actively seek opportunities to take advantage of this creativity as early as possible when fielding a new system.

Operation *Desert Storm* took place just as the Air Force was fielding the first fully operational GPS satellite constellation. In the 16 months prior to the conflict, the Service launched 8 of the planned 24 Block II satellites, with the eighth one lifting off from Cape Canaveral on the day that Saddam Hussein invaded Kuwait in August 1990.[33] The Air Force was able to launch two more satellites before the start of the air campaign in January 1991.[34] In conjunction with several Block I prototype satellites that were functioning beyond their design life, these satellites provided two-dimensional (latitude and longitude) coverage of the theater for almost 24 hours per day and three-dimensional (latitude, longitude, and altitude) coverage for about 19 hours per day.[35]

In the first minutes of the air campaign, the operational success of Task Force Normandy provided an excellent example of the creativity of our joint warfighters. This task force was a group of Army AH–64 attack helicopters guided by Air Force MH–53 special operations helicopters that penetrated Iraqi air defenses at low level at night to destroy two early warning radars.[36] This mission helped breach the Iraqi air defenses and allow waves of aircraft to begin making attacks deeper inside the country. The Airmen and Soldiers planning the air campaign developed this tactic when they realized the MH–53s did not have the firepower to destroy the targets and the AH–64s did not have the navigation accuracy to find the targets at night in the featureless desert. (It is interesting that this is just one of many innovations the GAO analysts did not foresee in their reports assessing the cost and benefit of GPS 10 years earlier.) Official accounts of Operation *Desert Storm* are uniform in their praise for GPS because the list of operational successes similar to Task Force Normandy's mission is so long. However, many of the GPS-enabled TTPs employed in *Desert Storm* were developed at the last minute because few troops had even heard of GPS prior to the conflict.[37]

A few missed opportunities emerge when the shortcomings of Operation *Desert Storm* are considered in light of the opportunities to avoid them. A significant example involves fratricide. Official reports of *Desert Storm* note that GPS prevented friendly fire casualties because improved navigation accuracy reduced the number of times coalition units accidentally came into contact with each other.[38] When coalition forces attacked during Operation *Iraqi Freedom* a decade later, the likelihood of fratricide was decreased even further by a GPS-based technological solution known as Blue Force Tracking.[39] However, it is possible that joint forces may have developed better GPS-enabled procedures to decrease the incidence of fratricide in *Desert Storm* if operational units had the opportunity to use GPS in joint exercises in the years prior to the war.

U.S. Navy (Xander Gamble)

USS *Oklahoma City* embarks using Voyage Management System

one reason for the success of GPS was the ability of American troops to quickly develop tactics to exploit this emerging technology

The potential to develop better procedures to avoid fratricide is an example of a missed opportunity to accelerate the pace of transformation by conducting more joint exercises earlier in the development phase. Opportunities to work with GPS prior to Operation *Desert Storm* were limited because full fielding of the receivers was synchronized with the projected full operational capability of the Block II GPS constellation that was still a few years away when *Desert Storm* started.[40] In fact, when Iraq invaded Kuwait, the U.S. Army only owned 500 demonstration receivers.[41] However, the Block I satellites had been adequate to support joint exercises and testing for almost 10 years prior to Saddam's invasion of Kuwait. To mitigate user equipment shortages, these exercises could have used commercially available civilian GPS receivers that performed the same navigation functions as military receivers but lacked the ability to use the military-only encrypted signals. Thousands of these same commercial receivers were purchased by DOD in the months prior to Operation *Desert Shield*, where 85 percent of the 5,300 GPS receivers employed were commercial.[42] DOD missed an opportunity to accelerate the GPS transformation and shorten the overall timeline for integrating GPS into the force by developing more tactics in parallel with the equipment. The best way to accelerate transformation is to get representative equipment into the hands of the troops so they can use it to solve the problems they are facing in the field.

The concept of spiral development is another way to accelerate transformation. The basic concept is to field new systems in increments of increasing capability. In other words, the first version of a system may be much less capable than the final version, but it is fielded much earlier. While spiral development may increase the time required to field the most highly prized features, it has the potential to accelerate the pace of transformation because it harnesses the greatest strength of DOD—the expertise and creativity of personnel in the field. Hundreds or even thousands of troops using a new system will develop innovative TTPs to exploit strengths in ways that were not anticipated by its relatively small group of developers. Taken together, the advantages of fielding these transformational TTPs sooner may even outweigh the anticipated benefit of the features in the next version of the system.

GPS Today

The recent history of GPS serves as a clear reminder that transformation involves much more than a series of shifts from one technology to another. In the years since

Operation *Desert Storm*, the GPS satellite constellation has reached full operational capability, and GPS-enabled systems have become ubiquitous in both combat and support roles. Most experts would agree that GPS enabled transformation within the American military. However, this does not mean that DOD has achieved GPS transformation and can now move on to transforming some other segment of the joint force. In war, it is inherent that adversaries will react to our advances and strive to counter them. Saddam's attempts to employ GPS jammers in Operation *Iraqi Freedom* and terrorist use of GPS to survey targets provide two obvious examples of adversary attempts to counter our GPS advantage.

An interconnected and globalized world helps potential adversaries ranging in scale from nation-states to terrorist groups to gather and share information about our strengths and weaknesses and to develop tactics and equipment to exploit those weaknesses. The fact that adversaries are working to counter our GPS advantages affirms that the essence of DOD transformation is to create an organization that is able to stay ahead of adversaries who quickly use the tools of the globalized world to counter our strengths. That organization must be manned with visionary leaders working to harness the unbounded creativity and individual leadership of our Soldiers, Sailors, Marines, and Airmen.

The American military's greatest strength is exceptional leadership. This brief examination of four periods in the history of the Global Positioning System shows that the best way to enable transformation is to put it into the hands of leaders at every level. The early history of the system demonstrates that top leaders must have the vision to assess new concepts, which have the potential to improve the full spectrum of joint operations. If this assertion is true, then we must seek ways to develop this vision through training and experience targeted at preparing leaders to make these decisions. These same leaders must be empowered to use bureaucratic processes as decisionmaking aids with the understanding that these processes tend to be conservative and thus slow the pace of change. Operation *Desert Storm* clearly shows how well our troops in the field lead transformation when they are empowered to use their creativity and unique mission knowledge to develop TTPs exploiting the full potential of new technology. Joint exercises and spiral development are two potential methods of harnessing this creativity earlier in the transformation process. Finally, recent GPS history reminds us that the real challenge of transformation is to create an agile, adaptable organization, because potential adversaries are constantly reacting to our own developments and may even find ways to use them against us.

This case study also calls attention to the fact that while the world outside the Department of Defense is changing rapidly, many of the internal organizational challenges we face in transforming the department are similar to those faced at other times in history. These challenges are inherent to leading any large organization. As we work to adapt our organization and its processes to the 21st century, it may be useful to examine more of these transformational cases to enrich our understanding of past successes and failures. Other useful case studies might include the Navy's development of nuclear-powered submarines, the Army's development of the National Training Center at Fort Irwin, the Air Force development of stealth and precision-guided munitions, or the joint implementation of the Goldwater-Nichols Act. **JFQ**

NOTES

[1] Deputy Secretary of Defense, memorandum, "NAVSTAR Global Positioning System," December 22, 1973.

[2] Scott Pace et al., "The Global Positioning System: Assessing National Priorities," Report MR–614 (Santa Monica, CA: The RAND Corporation, 1995), 238.

[3] Ibid.

[4] Ibid.

[5] Ibid., 239.

[6] Patrick J. O'Brien and John M. Griffin, "Global Positioning System: Systems Engineering Case Study," Air Force Institute of Technology, Air Force Center for Systems Engineering, 24.

[7] Ibid.

[8] Ibid., 23.

[9] Dana J. Johnson, "Overcoming Challenges to Transformational Space Programs: The Global Positioning System," October 2006, 8, available at <www.analysiscenter.northropgrumman.com/files/NGACP_1006d.pdf>.

[10] Joe Ferrara, "DOD's 5000 Documents: Evolution and Change in Defense Acquisition Policy," Defense Acquisition University, 110, available at <www.dau.mil/pubs/arq/94arq/ferrar.pdf>.

[11] Deputy Secretary of Defense, memorandum, "Defense Navigation Satellite Development Program," April 17, 1973.

[12] Brad Parkinson, interview by Michael Geselowitz, November 2, 1999, 4, available at <www.ieee.org/portal/cms_docs_iportals/iportals/aboutus/history_center/oral_history/pdfs/Parkinson379.pdf>.

[13] Ibid.

[14] Ibid.

[15] Ibid., 6.

[16] Deputy Secretary of Defense, "Development Concept Paper Number 133: NAVSTAR Global Positioning System," May 11, 1974.

[17] Ibid.

[18] Ibid., 14.

[19] Johnson, 10.

[20] Comptroller General of the United States, *Comparison of the NAVSTAR Program with the Acquisition Plan Recommended by the Commission on Government Procurement* (Washington, DC: U.S. Government Printing Office, January 24, 1977), 11.

[21] Ibid., 12.

[22] Comptroller General of the United States, *The NAVSTAR Global Positioning System—A Program with Many Uncertainties* (Washington, DC: U.S. Government Printing Office, January 17, 1979), 6.

[23] Ibid.

[24] Ibid., 7.

[25] Ibid., 9.

[26] Comptroller General of the United States, *NAVSTAR Should Improve the Effectiveness of Military Missions—Cost Has Increased* (Washington, DC: U.S. Government Printing Office, February 15, 1980), 13.

[27] Ibid., 16.

[28] Michael Barone, Grant Ujifusa, and Douglas Matthews, *The Almanac of American Politics* (New York: E.P. Dutton, 1980), 112.

[29] Ibid.

[30] House of Representatives, Committee on Armed Services, *Department of Defense Authorization Act, 1982* (Washington, DC: U.S. Government Printing Office, May 19, 1981), 98.

[31] House of Representatives, *Department of Defense Authorization Act, 1982, Conference Report* (Washington, DC: U.S. Government Printing Office, November 3, 1981), 90.

[32] Department of Defense (DOD), *Conduct of the Persian Gulf War* (Washington, DC: U.S. Government Printing Office, April 1992), 876.

[33] Emory University, "GPS History," accessed at <www.emory.edu/business/et/552fall2002/location-devices/gps_-_history.htm>.

[34] Ibid.

[35] DOD, 876.

[36] Ibid., 169.

[37] Kaleb Dissinger, "GPS Goes to War—Global Positioning System in Operation DESERT STORM," Federal News Service, February 24, 2008.

[38] DOD, 876.

[39] Timothy L. Rider, "Blue Force Tracking to Expand Across Force," *Army AL&T Magazine* (September-October 2004), 3.

[40] O'Brien and Griffin, 23.

[41] Dissinger.

[42] DOD, 876.

Carpe DIEM

Seizing Strategic Opportunity in the Arctic

By ANTHONY L. RUSSELL

Lieutenant Commander Anthony L. Russell, USCG, wrote this essay while a student at the Marine Corps Command and Staff College. It won the Strategic Research Paper category of the 2008 Chairman of the Joint Chiefs of Staff Strategic Essay Competition.

The only thing heating up faster than the Arctic is the international competition by its surrounding nations to solidify their claims and to secure control of the area's valuable resources. At stake is more than 90 percent of the Earth's unclaimed seabed, which is believed to contain significant amounts of oil, gas, and precious minerals.[1] It has been nearly a century since the first explorers reached the North Pole in 1909, but due to drastic climate change and the renewed promise of wealth, the region is finally stepping to the forefront of international affairs. The United States must develop a comprehensive strategy to protect its national security, environmental, and economic interests in the Arctic or face being frozen out by the other Arctic nations (see figure 1).

Primarily, this situation is being influenced by four dynamics: climate, economy, sovereignty issues, and environment. This essay examines the elements of each of these dynamics and their specific implications for the United States. It then offers recommendations to shape the outcome in the best interests of America.[2]

Polar bears investigate USS *Honolulu* after it surfaces in Arctic Circle

U.S. Navy (Alphonso Braggs)

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The Shaping Dynamic

The most significant dynamic shaping affairs in the Arctic is climate change. According to the Arctic Council's Climate Impact Assessment, released in 2004, Arctic temperatures are rising at nearly twice the rate of the rest of the world and are forecast to increase by as much as 14 degrees Fahrenheit over the next century.[3] The outcome will be drastically declining sea ice coverage throughout the region. The 2007 summer marked the lowest recorded extent of sea ice since measurement began in 1979. For September, annually the month with the least amount of ice, the average area of ice coverage was only 1.65 million square miles, 23 percent less than the previous record low measured in 2005 (see figure 2). This is the low point in a trend that has seen ice coverage decline by approximately 10 percent per decade since 1979. Beyond just the numbers, for the first time in human memory, the fabled Northwest Passage across the Canadian north was ice-free for a month during the summer of 2007.[4]

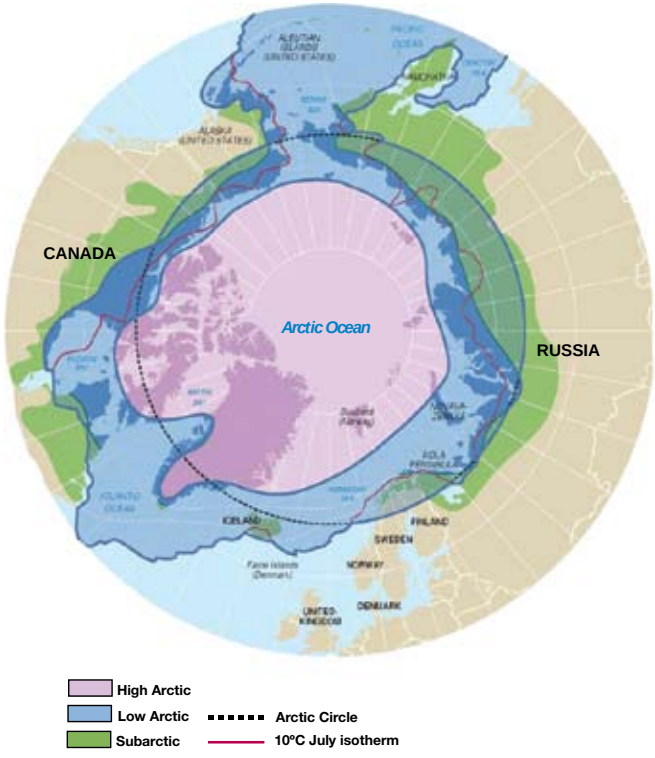
The Albedo Cycle is the natural process that amplifies global warming trends in the Arctic. The ice cover retreats when the temperature rises, allowing more energy to be absorbed by the ocean and less to be reflected into the atmosphere. This absorbed energy, in the form of heat, warms the ocean and thaws more ice, amplifying the effect in a continuous loop.[5] Additionally, scientists have recently observed a connection between the shrinking ice and ocean circulation patterns that bring warmer water into the Arctic region, further speeding the loss of ice cover.[6] Scientists examining Arctic warming have come to a consensus that we could witness a nearly ice-free Arctic as early as 2030 and no later than 2060.[7] If these predictions are true, they promise a much more accessible Arctic region, which will have significant environmental, economic, and security implications for the United States and other Arctic countries.

The Interest Dynamic

While climate change has opened the door to the Arctic, the economic dynamic has laid out the welcome mat. There is broad scientific consensus that the Arctic seabed holds a significant cache of oil, gas, and mineral reserves. Estimates of oil reserves range from a high of 25 percent of the world's remaining oil to a low of 3 percent.[8] This "low" estimate still equates to approximately 15 billion barrels of oil, or 2 years' worth of annual domestic consumption, just within the United States, and another 218 billion barrels undiscovered in the rest of the Arctic. These deposits do not have to be massive to significantly benefit U.S. economic and security interests. Currently, the United States uses 22 million barrels of oil per day, of which 64 percent is imported.[9] Declining global reserves, increasing prices, and growing demand for more secure and dependable energy sources make even modest domestic reserves of major strategic value.[10] Additionally, U.S. benefit does not exclusively result from domestic discoveries, but also derives from the greater security offered by new discoveries by Arctic allies such as Norway, Denmark, and Canada. As former U.S. Ambassador to Norway Tom Loftus stated, "It may be expensive to extract, but the political expense per barrel is less."[11]

Speculation of large oil and gas resources in the Arctic Ocean has been taking place since the 1960s, but it is only in the last decade that this source has begun to look profitable. In 1998, a barrel of crude oil would fetch less than

Figure 1. Definitions of the Arctic Region



Sources: Arctic Monitoring and Assessment Programme, Assessment Report Arctic Pollution Issues, 1996; AMAP Arctic Pollution Issues, "A State of the Arctic Environment Report", 1997; United Nations Environment Programme/GRID-Arendal.

National Oceanic and Atmospheric Administration

Arctic explorer Robert Peary is credited with leading first expedition to reach North Pole

$12, while the per-barrel average in 2007 was more than five times that and surpassed the $100 mark for the first time in February 2008. At these prices, the calculus shows significant profit potential for oil companies and has resulted in recent increases in investment. In July, ExxonMobil Canada and Imperial Oil bought the most expensive lease in the Beaufort Sea to date, committing to $585 million in exploration over the next 9 years.[12] On the U.S. side of the Beaufort Sea, oil giant Shell invested more than $80 million in exploratory activities in 2007.[13] Legal opposition has failed to put a damper on the interest in Arctic oil as demonstrated by the February 6, 2008, Chukchi Sea lease auction. The U.S. Mineral Management Service (MMS), responsible for the offshore leasing program, initially expected the auction to bring in $67 million, but it actually earned a record $2.6 billion.[14]

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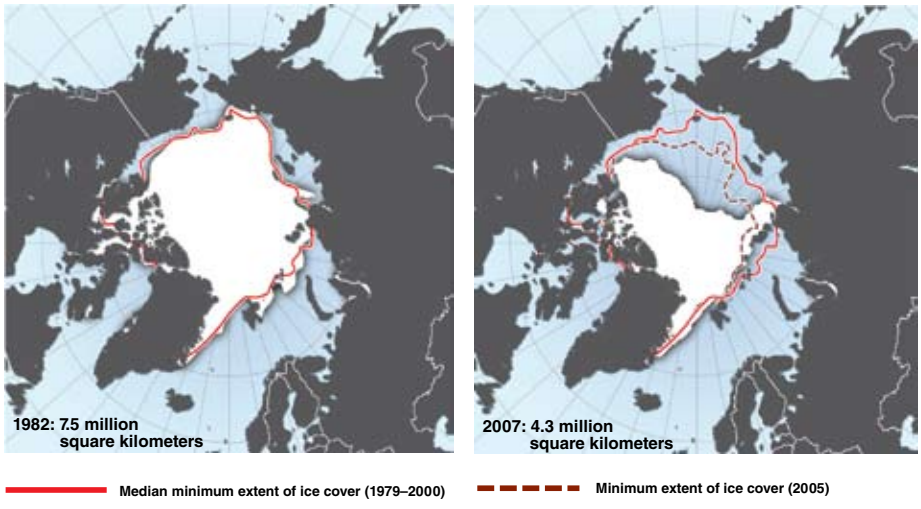
No matter how bountiful the resources of the Arctic may be, they are worthless if they cannot be extracted and transported. This requires shipping to support operations and infrastructure, as well as to transport the product. For instance, the relatively small Shell Oil operation in the American Beaufort Sea requires the support of nine vessels at a cost of $40 million.[15] With the promise of long-term need, the shipping industry has begun to take notice and is making a focused effort to design and build bigger and better "Arctic-capable" ships to support the forecasted rise in demand. For example, Samsung Industries is building three 120,000-ton tankers, capable of breaking through over 5 feet of ice continuously, specifically designed for the Varandey oil export project off northeastern Russia.[16] Industry-wide, the order backlog for ice-capable ships is at 152, which would increase the worldwide fleet of vessels of this kind by 50 percent.[17]

Maritime operations in an ice-free Arctic are not only about oil and gas, but also about regional and global shipping operations. Russia and Canada began bilateral talks in January 2007 to consider opening an "Arctic Bridge" between Murmansk and Churchill. The discussion was initiated by Russia and accompanied with the offer of using seven of their modern icebreakers to keep Churchill's port open year-round. Currently, the port operates only 4 months out of the year, primarily for wheat export.[18] The unexploited resources in Canada's Arctic provinces—including gold, silver, zinc, iron, and diamonds—are potentially worth trillions of dollars. The accessibility and profitability of these resources will increase significantly with continued warming and access to year-round port facilities. As an indication of this potential, revenues from the Northwest Territory increased by almost 10 times, from $24 million to $224 million, between 1998 and 2006.[19]

Figure 2. Reducing Sea Ice Coverage



Source: National Snow and Ice Data Center; Cartographer Hugo Ahlenius, United Nations Environment Programme/GRID-Arendal.

Arctic shipping routes have global implications through the possible opening of two new shipping routes, the Northern Sea Route and the Northwest Passage (NWP).[20] Both offer significant decreases in time and distance from the current routes through the Suez and Panama Canals. In the business of long-distance sea cargo, "time saved is money made."[21] Some analysts estimate the savings could be as much as $800,000 in fuel and labor per trip for a large freighter.[22]

In both trade and strategic terms, China would benefit substantially from a reliable Arctic passage. Currently, 60 percent of vessels transiting the strategic straits of Southeast Asia are either Chinese or carrying cargo to or from China.[23] Recently, both China and India have had talks with Russia about using the Northern Sea Route. Russia is also considering plans to ship liquefied natural gas (LNG) directly to the United States, which has become the largest LNG importer in the world.[24] Other industrialized nations such as Japan and South Korea could alter their energy import patterns away from volatile regions such as the Middle East and Africa.[25]

While conditions, demand, and technology are not yet right for these routes to be used regularly, it is clear that their use will be feasible in the near future. This will require establishment of consistent and appropriate international regulations for design, construction, and use of Arctic shipping. Additionally, capabilities and procedures must be put in place to respond to safety, security, and pollution incidents that are likely to accompany an increase in traffic. Naval architects have laid out design challenges that must be considered for ships intending to operate in the Arctic.[26] U.S. Coast Guard commandant Admiral Thad Allen expanded on this subject at the International Maritime Organization's 25th Assembly in November 2007, suggesting that the organization's Polar Code be broadened to include Arctic navigation and crew training standards, ice-capable vessel construction standards, traffic separation schemes, and pollution prevention and response.[27]

The Frictional Dynamic

Sovereignty, and ultimately resource control, is the most frictional dynamic in the shaping of the Arctic's future. *Foreign Policy* declared the Arctic to be "the world's most valuable disputed turf."[28] Sovereignty disputes existed in the region before Jean Bodin initiated the modern concept in 1576. Pursuit

of an east-to-west route from Europe to the Arctic was a driving force behind European expansion and exploration in North America, and now, centuries later, control of that fabled passage and several parts of the Arctic remain contested. At present there are six active territorial disagreements over land, water, and seabed, but in their essence, they are about control of and access to resources.

There are three maritime boundary disputes in the Arctic region, but they share one glaring commonality: oil. Russia and Norway have a standing dispute over their boundary in the Barents Sea that is preventing exploration of an area estimated to hold 40 billion barrels.[29] In addition, Russia has a maritime boundary disagreement with America over a portion of the Chukchi Sea, also believed to hold significant energy resources. The 18,000-square-mile area was ceded to the United States in 1990 under the U.S.-Soviet Maritime Boundary Agreement, but the treaty was never ratified by the Soviet or Russian parliament. In July 2007, Russian media outlets described the agreement as treasonous, and members of the Russian legislature have called for its review.[30] Finally, the United States and Canada have a standing dispute over their maritime boundary in the Beaufort Sea. This 100-square-mile area is said to be rich with oil and gas.[31]

The remaining points of contention are more complex and have broader regional impacts. First is the disagreement between the United States and Canada, with increasing interest by other nations, regarding the status of the NWP. The dispute concerns whether the passage is an international strait, as the United States asserts, or belongs to Canada's internal waters as part of an archipelagic state. At stake is the degree of Canadian control over activities within the NWP. By international law, as laid out in the United Nations Convention on the Law of the Seas (UNCLOS), vessels are entitled to exercise "transit passage" through international straits.[32] Vessels transiting through these straits are only required to comply with international laws, and additional requirements cannot be made by adjacent states. Vessels transiting through an archipelagic state are entitled to exercise "innocent passage." This means they have the right to transit through a state's territorial waters, but the state can establish and enforce its own nondiscriminatory regulations for certain activities, including fiscal, immigration, sanitary, and customs laws, and for the protection of resources.[33]

Canada's specific motivation for controlling use of the NWP is protecting its environment, a reasonable position considering how long and narrow the passage is and the direct impact an environmental incident would have. More significant in terms of resolution is the emotional nature of this issue for Canadians. They are proud that they are an "Arctic nation" and have traditionally been adamant about demonstrating their independence from the United States in their foreign policy. This places significant pressure on Canadian leaders to be hardliners.[34] The U.S. position is not specific to the NWP but emphasizes the principle of freedom of navigation, particularly as it applies to maritime chokepoints worldwide. U.S. acceptance of the Canadian claim as it stands now could set a precedent and embolden other nations to make similar claims, a dangerous domino effect in relation to U.S. foreign policy and national security interests.[35] While they seem far apart on the issue, both nations have substantial mutual interests that can be addressed through compromise, including the environment, safety, security, and economic development, and they should come to a workable solution sooner rather than later.

The most contentious of the Arctic disputes concerns the Lomonosov Ridge, an undersea formation that extends across the Arctic Ocean from North America, under the North Pole, to Siberia. The region has been subjected to conflicting claims by Russia, Denmark, and Canada. At the heart of determining the outcome of this issue is likely to be UNCLOS, which provides the procedures for establishing national sovereignty over the continental shelf beyond 200 nautical miles based on submissions to the Commission on the Limits of the Continental Shelf (CLCS). Russia submitted a claim over the ridge up to the North Pole in 2001. If accepted, the claim would have added another 460,000 square miles of Arctic seabed to Russia. The CLCS returned the claim citing a lack of scientific evidence. In the aftermath, all three nations have engaged in research efforts to strengthen their claims. This is no easy task because, as the *Wall Street Journal* put it, "We currently have better maps of Mars than of the Arctic seafloor."[36] Canada and Denmark are working cooperatively to counter the Russian claim, while the Russians recently emphasized their

sovereignty, and ultimately resource control, is the most frictional dynamic in the shaping of the Arctic's future

Sailors remove ice from hatch on USS *Alexandria* in Arctic Ocean

U.S. Navy (Shawn P. Eklund)

claim by literally planting their flag on the seabed directly under the North Pole.[37]

Conspicuously absent from this dialogue is the United States, which has yet to ratify UNCLOS. The United Nations adopted UNCLOS in 1982, but Washington opposed the treaty as "global socialism." Since then, the concerns expressed against UNCLOS by President Ronald Reagan have been resolved, and the treaty was signed in 1994, though it still awaits Senate ratification.[38] Congressional conservatives remain concerned about the perception of ceding so much control to the United Nations. At stake is a seat with veto power on the decisionmaking body.[39] UNCLOS supporters, including the odd allegiance of oil and environmental lobbyists, hope the Russian flag planting will serve as a tipping point for U.S. ratification.[40]

the Russians recently emphasized their claim by literally planting their flag on the seabed directly under the North Pole

The challenge for the United States is protecting its sovereign interests and meeting its responsibilities in an accessible Arctic. The opening of the Arctic exposes a fifth border that must be monitored and secured as well as introducing increased maritime activity that requires a regulatory and response capability. Responsible for addressing this challenge is the U.S. Coast Guard, which is both the Federal law enforcement presence and military maritime component commander for the region. While the Coast Guard is familiar with and has significant resources in Alaska, these operate almost exclusively on the southern side of the state and are not positioned or prepared for regular Arctic operations. Additionally, the Coast Guard has only three polar class icebreakers; two of these are over 30 years old, with one currently inoperable, and the third is not designed for climate-extreme operations. This shortage of assets restricts the already challenging management of precious Arctic resources. With sovereign interests at both poles of the Earth, the United States must examine the value of the interests at stake and make appropriate investments to protect them.[41]

The Ironic Dynamic

"To environmentalists, then, the prospect that the Arctic—thus far the place where climate change has been most dramatic—might yield significant oil deposits . . . forestalling further movement toward alternative fuels, is particularly galling."[42] This quotation sums up the irony of the environment dynamic in the Arctic's new prominence on the international scene. Relatively little is known about the region's environmental system and its global influence, but natural recovery in the Arctic zone is slow, and thus the idea of "short-term" impacts is irrelevant when considering the consequences of our actions. It is the significance of what we know, and the potential of what we do not know, that motivates environmental and scientific interest in the Arctic.

This comes into direct conflict with economic activities and has led to several lawsuits. Shell Oil, for instance, was not able to conduct the exploratory drilling it paid to do in 2007 due to a U.S. Federal Court injunction resulting from a lawsuit filed by the interesting pairing of indigenous whalers and environmentalists against the MMS. Similarly, conservationists and some Alaskan Native groups filed a lawsuit, also against the MMS, to block the sale of leases for drilling in the Chukchi Sea due to concerns about the protection of polar bears, whales, and walruses. At issue in both cases is the opinion that not enough research was done concerning the potential impact of these activities and the threats of a major oil spill. The MMS contends that its environmental impact program is ongoing and that enough of an assessment has been completed to allow preliminary exploration activities, and more detailed assessments are required for more invasive activity. Additionally, leaseholders are required to implement mitigating measures for whaling.[43]

Related to these lawsuits is the battle between the polar bear and the oil companies. A conglomeration of environmental groups petitioned the U.S. Fish and Wildlife Service (FWS) in 2005 to add the polar bear to the Endangered Species Act (ESA). The most interesting thing about this petition is that it bases the polar bear's threatened condition on global warming. Opponents fear that granting the polar bear ESA status on these grounds would give environmental litigators a legal basis to go after countless industries, even those well outside the animals' natural habitat, that contribute to the greenhouse gases in the atmosphere believed to cause global warming. Additionally, these opponents contend that the science being used to justify the listing is faulty and that polar bears are actually more abundant now than at any time in the 20th century.[44] Most recently, three conservation groups filed a lawsuit against the Department of the Interior, which oversees the FWS, asking the court to order the department to

Sailor loads supplies on aircraft bound for ice station at Prudhoe Bay, Alaska

U.S. Navy (Erik Reynolds)

make a decision regarding the polar bear's status. This determination was originally supposed to be made by January 9, 2008, but the FWS delayed the decision, citing the need to evaluate new data.[45] Proponents for protecting the bears believe the delay was intentional, so as not to interfere with the MMS Chukchi Sea lease auction, which took place February 6, 2008, and was originally announced on January 2.[46]

The clamor over the Arctic has been loud enough to get the attention of lawmakers. Bills have been introduced in both houses of Congress intended to delay any drilling activity in the Chukchi Sea until the polar bear listing decision has been made and there has been more thorough research into the full impacts of exploration.[47] More proactively, the Senate has approved a resolution requiring the United States to pursue an international agreement for managing Arctic fisheries. This resolution follows a decision by the North Pacific Fishery Management Council to put a moratorium on fishing in Federal Arctic waters until a formal management plan is in place.[48]

While the lawsuits get the headlines, it is generally agreed that the largest environmental threat in the Arctic is the possibility of a major oil spill. Such an event there could be much more devastating to the environment than in other parts of the world. The freezing temperatures and clustering habits of many of the region's species would make the effects simultaneously more enduring and damaging. Additionally, the response capabilities to meet the unique challenges of a major Arctic oil spill are currently nonexistent. Contrary to conventional wisdom, the reduction in sea ice has actually increased the risk of having a spill. While the amount of shipping activity increases, the unpredictability and mobility of the ice increases the hazards to navigation.[49] One positive outcome from this situation is the increased emphasis on researching and developing response strategies to an Arctic oil spill. Along these lines, the National Oceanographic and Atmospheric Administration is spearheading efforts to study the behavior of oil in ice, how to locate oil under ice or during dark periods, and the best response strategies, including mechanical methods, chemical dispersants, burning, and weathering.[50]

Implications to 2020

Implications for the United States and the Arctic are about what *is* and what *could be*. The Arctic *is* a new and unique region influencing U.S. national security interests. It *is* a major source of future energy resources vital to the Nation's long-term security and viability. The U.S. approach to the Arctic *is* an opportunity to begin reshaping world opinion, particularly as it concerns foreign affairs, energy policy, and the environment. U.S. strategy in the Arctic *could be* the catalyst to improve Washington's international reputation and influence the security environment worldwide without compromising specific national interests. This opportunity is enhanced by coming simultaneously with a changing U.S. Presidential administration, making it easier to overcome current American credibility challenges.

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The first dynamic to be addressed by a U.S. Arctic strategy must be sovereignty. The increasing accessibility of the Arctic not only increases our sovereign opportunities but also influences our sovereign responsibilities, particularly in the areas of safety, security, and environmental stewardship. The focus on the Arctic must look beyond sovereign interests and work to support a regional consensus that improves relationships and enhances cooperation throughout the Arctic. Next, the United States must find the right balance between the economic and the environmental dynamics, ultimately emphasizing sustainability and stewardship over development. This is not to say that the economic potential of the region cannot be tapped but rather that the Arctic environment and its potential global influence must be better understood before actions are taken that may irrevocably harm the region. Thus development must be pursued cautiously. The economic potential of the Arctic should be considered as a long-term economic opportunity across a range of enterprises rather than as a short-term energy boom that could have lasting repercussions. This strategy should borrow from the medical profession's philosophy: *To help, or at least to do no harm.*

The U.S. Arctic strategy should look to capitalize on both the real and perceptional opportunities presented and *Carpe DIEM*—seize the day. This expression is chosen both to be representative of the new opportunity in the Arctic and to frame the strategic approach. *DIEM* is a play on the traditional acronym (DIME) for the instruments of national power: diplomacy, information, economy, and military. The order of these elements is intentionally based on the priority they *should be* given relative to each other.

Diplomacy. Emphasis in this area should be put toward resolving issues of sovereignty and strengthening a cooperative environment among the Arctic states that emphasizes regional stability and sustainability. Specifically, the United States should actively embrace the Arctic Council and seek to expand its role as a forum of cooperation, collaboration, and arbitration for the region, fostering an environment where regionalism is at least on par with nationalism. Ratification of UNCLOS is of paramount importance to any effective U.S. Arctic strategy. Without it, the United States is unable to influence the outcome of the sovereignty disputes favorably and will further its global reputation as a unilateral actor. Washington should adopt the policy position that the Arctic region is unique in terms of both geography and environment. Foreign policy can thus be applied to the region uniquely. Once established, this policy could allow a special compromise with Canada on the NWP that could be justified in a manner that counters any potential ripple effect from other nations straddling strategic straits. Negotiations toward this compromise could be facilitated through the Arctic Council and the United Nations, which would enhance the council's efficacy while demonstrating U.S. commitment toward cooperation in the region.

Information. A successful U.S. Arctic strategy requires broad-based domestic support, so emphasis has to be given to an information campaign that increases awareness of the Nation's Arctic status and touts its long-term benefits but plays down the energy potential of the region while making environmental considerations paramount. Internationally, the United States should use its significant scientific and research capabilities as goodwill currency to foster a collaborative spirit within the Arctic Council. This measure could be used to support diplomatic efforts by helping to provide the scientific support for a single seabed-claim submission on behalf of the entire Arctic region to the CLCS. Finally,

the United States must work to completely separate the development of the Arctic and the theory of energy independence. Instead, the potential of future energy resources should be framed in terms of improving the global energy situation and reducing the tensions these resource demands cause.

Economics. Consistent with the points emphasized in the information element of this strategy, U.S. economic activities in the Arctic should not be overly focused on energy resources. The economic opportunities in the region are substantial, but to be beneficial for the long term, they need to be effectively pursued and regulated. Again, the emphasis should be on regional cooperation, using the Arctic Council as a coordinating body to develop regulatory regimes that are supported and enforced uniformly. Specific actions should include Arctic-specific shipping regulations passed through the International Maritime Organization and development of an international Arctic fisheries management plan. Additionally, there are economic opportunities related to the environmental emphasis on the region. One opportunity that this strategy should look to exploit is the potential for mutually beneficial cooperation between industry and science to simultaneously study the Arctic for both environmental understanding and economic potential. These efforts could be international in scope and regionally coordinated through the Arctic Council. Finally, the economic benefit of the region should be used in part to establish a regional fund to support cooperative efforts in research, emergency response programs, and sustainable development.

Military. As stated in the new *A Cooperative Strategy for 21st-Century Seapower*:

Climate change is gradually opening up the waters of the Arctic, not only to new resource development, but also to new shipping routes that may reshape the global transport system. While these developments offer opportunities for growth, they are potential sources of competition and conflict for access and natural resources.[51]

Though this strategy recommendation emphasizes regionalism over nationalism, in the area of national security, the United States must be prepared and postured to protect itself first. Our current capability to operate effectively in the Arctic environment is severely limited, and there is no quick fix. The capital investment must be started now to enhance our ability to establish a permanent sovereign presence in the Arctic environment. In the interest of stewardship, the primary means for this presence should be multimission platforms, such as the icebreakers we currently have, that are able to conduct near-simultaneous military, law enforcement, rescue, research, and environmental response operations. Additionally, the United States should gradually establish the shore-based support infrastructure required for a near-continuous Arctic presence by 2020.

Even in this area of national power, there are numerous opportunities to enhance regional cooperation. America should work closely with its Canadian allies toward complementary development, basing, and employment of Arctic assets. This could be done through the joint organization already in place at the North American Aerospace Defense Command. Additionally, the network of regional Coast Guard forums already in place in the North Pacific and North Atlantic could be used as a model for the development of an Arctic Coast Guard Forum to improve regional security, safety, and response coordination.

The increasingly accessible Arctic presents a new and unique opportunity for the United States, and it should *Carpe DIEM* as proposed above. By doing so, the Nation can simultaneously reduce the level of competition and conflict in the Arctic, secure its own national interests, and improve its global reputation. The recommended U.S. Arctic Strategy can foster a new atmosphere of cooperation in the region that provides for the sustainable development of the vast economic opportunities while protecting the critical environment. In doing so, the United States and its regional partners can improve their long-term economic viability and reduce the influence of energy resources on global security, easing tensions worldwide. **JFQ**

NOTES

[1] Colin Woodard, "Who Resolves Arctic Oil Disputes?" *The Christian Science Monitor*, August 20, 2007.

[2] The *Arctic states* are Canada, Denmark (via Greenland), Finland, Iceland, Norway, Russia, Sweden, and the United States. Finland and Sweden, however, do not actually border the Arctic Ocean, which is a primary influence in Arctic international affairs.

[3] Arctic Climate Impact Assessment, *Impacts of a Warming Arctic: Arctic Climate Impact Assessment* (Cambridge: Cambridge University Press, 2004), 8.

[4] National Snow and Ice Data Center, "Arctic Sea Ice Shatters All Previous Record Lows," press release, October 1, 2007, available at <http://nsidc.org/news/press/2007_seaiceminimum/20071001_pressrelease.html>.

[5] Rune G. Graversen et al., "Vertical Structure of Recent Arctic Warming," *Nature*, January 3, 2008, 53–56.

[6] Oxford Analytica, "Ice Melt Drives Sea Rise," November 22, 2007.

[7] Ibid.; National Snow and Ice Data Center.

[8] Tim Bennett, "The Scramble for the Arctic," *Moneyweek*, August 17, 2007.

[9] Jonas Gahr, "Meeting Energy Demands and Security Needs: A Transatlantic Perspective," lecture at Georgetown University, Washington, DC, February 27, 2007.

[10] Telis Demos, "Arctic Circle Oil Rush," *Fortune*, August 20, 2007, 11.

[11] William Underhill, "Hot on the Pole," *Newsweek* (international ed.), April 16, 2007; Olav Orheim, "Challenges and Prospects in the Arctic," *Scandinavian Review*, Summer 2006, 26.

[12] CBC News, "Imperial, ExxonMobil to Explore Beaufort Sea for Oil, Gas," July 19, 2007, available at <www.cbc.ca/canada/north/story/2007/07/19/nwt-imperial.html>.

[13] Nina M. Rach, "Shell Alaska Readies Ice-class Drilling Units for Beaufort Sea," *Oil & Gas Journal* 105, no. 37 (October 1, 2007).

[14] Steve Macdonald, "Chukchi Sea Lease Sale Brings $2.6 Billion in Bids," accessed at <www.ktuu.com/Global/story.asp?s=7833506>; and Minerals Management Service, "MMS Chukchi Sea Lease Sale 193 Breaks Energy Records With $2.6 Billion in High Bids," news release, February 6, 2008.

[15] Rach.

[16] Peter G. Noble, "Oil and Gas Exploration, Development, Production and Transportation in Arctic Regions," presentation to the Impact of an Ice-Diminishing Arctic on Naval and Maritime Operations Symposium, Washington, DC, July 10–12, 2007.

[17] Hugo Miller, "Global Warming Melts New Sea Lanes for Norilsk, ConocoPhillips," February 26, 2008, available at <www.bloomberg.com/apps/news?pid=20601082&refer=Canada&sid=aQ4ROJIItxvU>; "LNG Tanker Designs Hold Key to Russia's Arctic Gas Reserves," *Oil & Gas Journal* 104, no. 32 (August 28, 2006), 55–56.

[18] Underhill; Shawn McCarthy, "Russia Offers to Break the Ice on the Route to Port Churchill," *The Globe and Mail*, January 11, 2007, B1.

[19] Ed Struzik, "Nightmare at Sea," *The Toronto Star*, November 24, 2007, A18.

[20] The Northern Sea Route follows the northern coastline of Russia, providing a direct route from the North Sea of the Atlantic to the Northeast Passage of the Pacific. The Northwest Passage transits between the top of continental Canada and its northern islands.

[21] Michael Richardson, "Northern Exposure," *South China Morning Post*, August 23, 2007, 13

[22] Miller; Underhill.

[23] Richardson.

[24] McCarthy.

[25] Michael Richardson, "The Last Big Cold Rush Heats Up," *The Straits Times* (Singapore), August 31, 2007.

[26] Such as Peter G. Noble, chief naval architect for ConocoPhilips.

[27] Thad W. Allen, "Opening Remarks to the 25th International Maritime Organization Assembly," London, UK, November 2007.

[28] "The List: The World's Most Valuable Disputed Turf," August 2007, available at <www.foreignpolicy.com/story/cms.php?story_id=3918>.

[29] Ian Talley, "Norway, Russia to Restart Barents Dispute Talks," October 13, 2005, available at <www.rigzone.com/news/article.asp?a_id=25997>.

[30] Yuri Zarakhovich, "Russia Claims the North Pole," *Time*, July 12, 2007.

[31] Demos.

[32] Article 38 of Part III United Nations Convention on the Law of the Seas (UNCLOS): Right of transit passage.

[33] Article 21 of Part II to UNCLOS: Laws and regulations of the coastal state relating to innocent passage.

[34] Clifford Krauss, "Canada's Next Leader Clashes with U.S. Over Arctic Waterways," *The New York Times*, January 27, 2006, A7.

[35] Barry Brown, "Navigable Arctic Passage Draws Claim on Seabed," *The Washington Times*, September 4, 2007, A1.

[36] Robert L. Hotz, "U.S. Draws Map of Rich Arctic Floor Ahead of Big Melt," *The Wall Street Journal*, August 31, 2007.

[37] Randy Boswell, "Ice May Thwart Mission to Claim Arctic Territory; Oil and Gas Deposits," *National Post*, August 9, 2007, A9.

[38] The treaty is now supported by the current administration, several past Secretaries of State, including Reagan's, the Joint Chiefs of Staff, and the Commandant of the Coast Guard.

[39] Ken Adelman, "Sea Law Turbulence," *The Washington Times*, December 12, 2007.

[40] James Graff, "Fight for the Top of the World," *Time*, October 1, 2007, 28.

[41] Sandi Doughton, "Aging Fleet Slows U.S. in Arctic 'Chess Game,'" *Seattle Times*, September 20, 2007. By comparison, Russia has 18 icebreakers, 7 of them nuclear; Finland has 7; Canada has 6, though they are in declining condition; and Sweden has 1.

[42] Drake Bennett, "Northern Exposure: As the Arctic melts, vast deposits of oil and gas may be opened up for exploration. Will an Arctic without ice only prolong our dependence on fossil fuels?" *Boston Globe*, February 18, 2007.

[43] Felicity Barringer, "Suit Seeks to Block Oil Search Off Alaska," *The New York Times*, February 1, 2008; Minerals Management Service (MMS), "Remarks Prepared for MMS Director Luthi, Chukchi Sea Sale 193," February 6, 2008, available at <www.mms.gov/PDFs/Speech--LuthiRemarks-Sale193-02-05-08%20_2_%20(2).pdf>.

[44] M. David Stirling, "Polar Bears and Melting Ice," *The Washington Times*, March 7, 2008, A17.

[45] U.S. Fish and Wildlife Service, "Bulletin: Statement for Polar Bear Decision," news release, January 7, 2008; and The Wilderness Society, "Opposition Builds Against Drilling Arctic's Chukchi Sea: Alaska Natives and Conservation Groups Challenge Lease Sale," news release, January 31, 2008.

[46] The Wilderness Society, "Minerals Management Service Announces Controversial Chukchi Lease Sale Days before U.S. Fish and Wildlife Service Is Due to Decide Fate of U.S. Polar Bears," news release, January 2, 2008.

[47] The Wilderness Society, "Opposition Builds."

[48] "Senate Approves a Resolution for Managing Arctic Ocean Fisheries," *The Alaska Journal of Commerce*, October 21, 2007, available at <http://www.alaskajournal.com/stories/102107/hom_20071021040.shtml>.

[49] "Conference Debates Cleaning Up Oil Spills in Ice-choked Arctic Waters," October 9, 2007, available at <www.cbc.ca/canada/north/story/2007/10/09/cp-north-ice.html>; and Thad W. Allen, "Remarks to the 37th IFPA–Fletcher Conference on National Security Strategy and Policy," Washington, DC, September 27, 2007.

[50] Amy A. Merten, "Increased Need for Arctic Oil Spill Prevention and Response," presentation to the Impact of an Ice-Diminishing Arctic on Naval and Maritime Operations Symposium, Washington, DC, July 10–12, 2007.

[51] *A Cooperative Strategy for 21st-Century Seapower*, October 2007, available at <www.navy.mil/maritime/MaritimeStrategy.pdf>.

The Russian Chechen Wars
Three Lessons for U.S. Defense Planners

By DANIEL T. CANFIELD

The Russian Chechen wars (1994–2000) were the last major conflicts of the 20th century. Though overshadowed by America's amazing success in the first Gulf War and the tragic events of 9/11, Russia's ongoing conflict in Chechnya provides a glimpse into the future evolution of warfare. It also serves as a stark reminder of the cruel realities inherent in urban combat and the difficulties associated with military occupation and conducting counterinsurgency among a shrewd and determined enemy.

Background

Russia's strategic and territorial ambitions first collided with the mountainous, clan-based peoples of Chechnya in the late 17th century.[1] For the sake of brevity, the roots of the contemporary conflict may be traced to the waning days of the former Soviet Union. In December 1994, the Russian army entered Chechen territory in an ill-fated attempt to regain control of the breakaway republic.[2] By late December, three heavy Russian columns converged on Grozny. After a calamitous New Year's Eve assault, the Russians, quite unexpectedly, found themselves confronting a protracted and well-organized insurgency led by Jokhar Dudayev.[3]

Russian forces, employing massive amounts of indiscriminate firepower, eventually seized Grozny in March 1995. Most of the battle-hardened Chechen fighters, however, simply melted into the mountainous countryside, regrouped, and continued to fight. After nearly 2 years of desultory warfare, Chechen irregulars retook Grozny in August 1996. By November, a defeated and demoralized Russian army withdrew from the republic.[4] But the conflict was far from over. Regrettably

Russian Interior Ministry soldiers conduct sweep for suspected rebels in Grozny, Chechnya

AP/Wide World Photo (Yuri Tutov)

for both sides, it merely metastasized into something far more dangerous.

After years of social, economic, and political fragmentation, the Chechens proved incapable of self-governance in the wake of the Russian withdrawal. Original nationalistic goals and intentions gave way to a witch's brew of corruption and competing self-interests fueled by organized crime and the rise of radical Islamist ideology. In August 1999, 500 Wahhabist fighters, including many non-Chechens, crossed the border into Dagestan and seized control of several villages as a precursor to the establishment of a greater Islamic state in the Transcaucasus.[5]

The Russians responded decisively. Vladimir Putin, with the strong backing of the Russian people, ejected the rebels and sent 50,000 troops to the Chechen border. In October, a large Russian army, adapting to the painful lessons of the original 1994 invasion, crossed the border and laid siege to Grozny. By February 2000, Russian troops seized the capital and, once again, forced what remained of the splintered Chechen resistance into the mountains.[6] The Russian occupation continues to this day. The conflict has consumed nearly 14 years, required the sustained commitment of thousands of troops, cost an incalculable sum, and led to the deaths of an estimated 6,000 Russian soldiers and an untold number of civilians.[7]

A careful examination of the Russian experience in Chechnya reveals a plethora of valuable lessons.[8] This article, however, focuses on just three. It argues that the paucity of human intelligence, conundrum of urban combat, and political ambiguities associated with the application of conventional military force against a nonstate actor constitute the three most prominent, relevant, and challenging issues for contemporary and future U.S. defense planners.

Human Intelligence

Despite over 2 centuries of experience in the Caucasus, the Russian military embarked upon its initial 1994 campaign with a surprising deficiency of cultural and human intelligence. The Russian government, once masters of political subterfuge and covert action under the Soviet regime, not only failed to engineer a coup but also found itself strangely naïve to the tactical and political realities confronting its forces on the ground. Once committed, Russian intelligence services proved ineffective and slow to adapt to the irregular character of the conflict.[9]

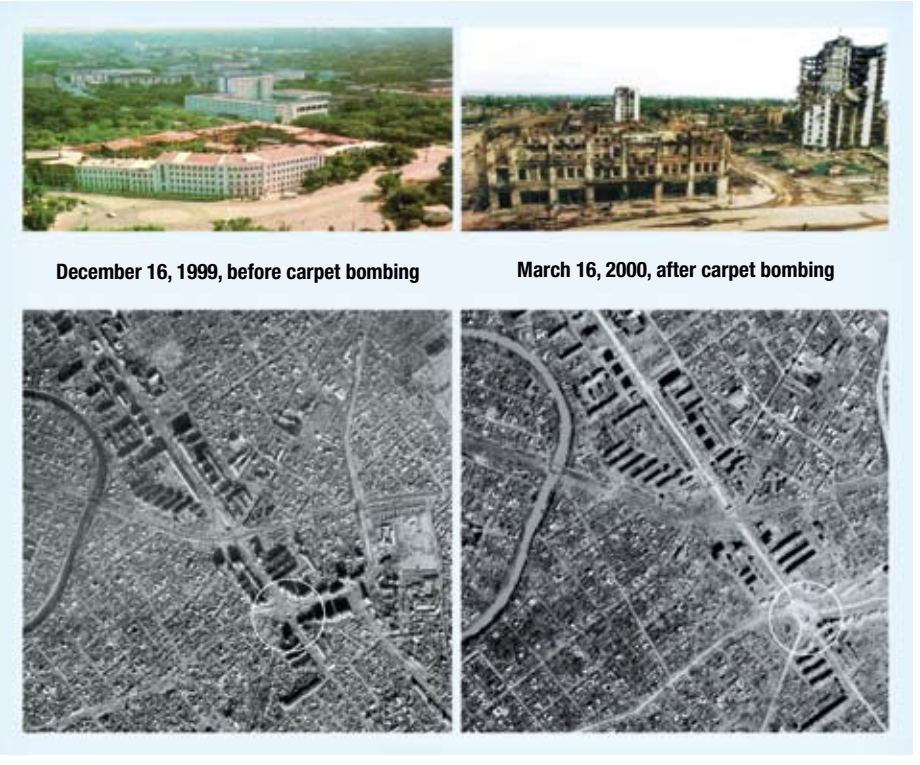
The American defense establishment, sobered by its own intelligence failures, should take careful heed of Russian shortcomings. Throughout the Cold War, the United States, like the Russians, became infatuated with the temptress of technology at the expense of developing traditional human collection capabilities.[10] The Russians, as evidenced by their ability to locate, target, and kill several prominent Chechen "terrorists," realized the errors of their ways and have seemingly adapted their methods accordingly.[11] Seven years after 9/11, however, America's global interests and responsibilities still far exceed its human intelligence capabilities. Technology, of course, has its role, but spy satellites and computers have limited use against terrorists and insurgents operating within a hostile or ambivalent population. Not surprisingly, intelligence success in such a war remains the province of bold and determined human beings, not machines.

Urban Combat

Despite all our illusions of sophistication, urban combat remains a bloody and costly endeavor in which the defender possesses numerous tactical advantages. It is a tough, up-close, and personal fight that negates advantages in mobility, firepower, and technology. Success on the urban battlefield requires prodigious amounts of dismounted infantry; tenacious, adroit small unit leadership; and a reluctant acknowledgement of the costs in terms of casualties and the inevitable destruction of local infrastructure. The Russian experience only reinforces these long-held truths.[12]

The Russians, forced to destroy Grozny in order to take it, are viewed through the lens of the conflict's limited historiography as bumbling and unsophisticated novices who cruelly bludgeoned their way to an imperfect victory. It may be helpful to temper such self-promoting rhetoric with a realistic assessment of how the United States, or any one else, would have performed under the same circumstances. Urban warfare remains both firepower- and manpower-intensive. Ironically, the United States has trained, organized, and equipped an expensive, high-tech force

Grozny Before and After Conflict



December 16, 1999, before carpet bombing

March 16, 2000, after carpet bombing

Sources: Photos from "Chechnya: Urban Warfare Lessons Learned," lecture delivered Spring 2000 at Marine Corps Amphibious Warfare School. Satellite images from "Understanding the Guerrilla," Nation Building Seminar by Chris Shepard, May 2005, Chicago-Kent College of Law, Illinois Institute of Technology.

Major Daniel T. Canfield, USMC, wrote this essay while a student at the Marine Corps Command and Staff College. It won the Strategy Article category of the 2008 Chairman of the Joint Chiefs of Staff Strategic Essay Competition.

with a disturbing paucity of dismounted infantrymen at the very time the explosive growth in global urbanization and irregular warfare has rendered the employment of such a force dangerously inadequate.

Force

Clausewitz's famous dictum that war is a continuation of policy by other means dominates contemporary Western thinking about war.[13] Yet in an increasingly complex world, a troubling issue arises: can traditional military force be applied against a nonstate actor, and if so, how? This question, significantly beyond the scope of the current article, nonetheless constitutes one of the dominant issues of our time. It also strikes at the heart of the Russian Chechen conflict. While the traditional nation-state employs violence within the constraints of its responsibilities for self-preservation and the general betterment of its citizenry,

Multinational Corps Iraq–Information Operations (Samuel Bendet)

Iraqi man and child wait as Soldiers prepare to search their home

the nonstate actor—possessing no capital, people, or industry to protect—suffers no such inhibitions. How does a nation-state, therefore, prevail against an enemy whose ethnic and/or religious zealotry trumps the logic of self-preservation and usurps the responsibilities inherent in the traditional social contract?[14]

The Russians confronted this dilemma long before 9/11. Initially ceding political defeat in 1996, they were forced to return in overwhelming numbers when Chechnya descended into social anarchy and became a breeding ground for radicalized splinter groups that hijacked the political process and placed their religious ideology over the interests of the fledgling Chechen state.[15] Though the Russians, at tremendous cost, succeeded in suppressing the once vibrant insurgency, it remains to be seen whether they or the United States in Iraq and Afghanistan will consummate military victories with enduring political success. Failure to accomplish the latter renders the achievement of the former, no matter how nobly fought or adroitly conceived, irrelevant.

While the nature of war remains constant, the conduct of warfare appears to be morphing in new and dangerous ways. Chechnya has a great deal to teach us about the realities of urban combat, the challenges of military occupation, the nature of contemporary counterinsurgency, and the absolute imperative of a well-crafted national strategy that employs all instruments of national power while balancing military means with political ends. The Russian Chechen Wars also serve as a model for the type of hybrid/complex irregular warfare that America's enemies are likely to employ now and in the future.[16] At present, the United States wields a national political/military instrument dangerously ill suited to defeat irregular threats. It also seems strangely unconcerned about the dangers of employing indecisive military force and the strategic opportunity cost associated with protracted, desultory warfare that, in many ways, conforms to the nonstate actor's strategy of deliberate provocation.

If Afghanistan was Russia's Vietnam, will Iraq become America's Chechnya? In the years ahead, nation-states, like former colonial powers, will continue to find their authority, influence, and power increasingly challenged by nonstate actors. Perhaps the real legacy of Chechnya is not the obvious realization that the people represent the center of gravity for both the insurgent and the government, but rather the sublime realization that an ounce of political prevention is worth a pound of military cure. We should not hold the Russians in contempt or hypocritically criticize their military proficiency; we should learn from them. **JFQ**

NOTES

[1] Bruce Empric, *Chechnya: Russia's Quagmire* (Carlisle Barracks, PA: Army War College, 2002), 3.

[2] For a general overview, see Olga Oliker, *Russia's Chechen Wars 1994–2000: Lessons from Urban Combat* (Santa Monica, CA: The RAND Corporation, 2001), 9–27.

[3] Richard H. Shultz, Jr., and Andrea J. Dew, *Insurgents, Terrorists, and Militias: The Warriors of Contemporary Combat* (New York: Columbia University Press, 2006), 122–123.

[4] Ibid., 126–131. Also see Lester W. Grau and Timothy Smith, "A 'Crushing' Victory: Fuel-Air Explosives and Grozny 2000," *Marine Corps Gazette*, August 2000, 30–34.

[5] Ibid., 132; Oliker, 39–41.

[6] Shultz and Dew, 133.

[7] Precise casualty figures remain elusive. Russian losses in the first Chechen war (1994–1996) are generally estimated at 6,000 killed in action. See Robert M. Cassidy, *Russia in Afghanistan and Chechnya: Military Strategic Culture and the Paradoxes of Asymmetric Conflict* (Carlisle Barracks, PA: Strategic Studies Institute, 2003), 1. Estimates of Chechen and/or civilian casualties vary widely. For example, see Scott E. McIntosh, *Thumping the Hive: Russian Neocortical Warfare in Chechnya* (Monterey, CA: Naval Postgraduate School, 2004), 17. Shultz and Dew claim that 27,000 Chechen noncombatants were killed in Grozny alone during the initial 1994 assault. See Shultz and Dew, 125.

[8] See Oliker, ix–xv; Gregory J. Celestan, *Wounded Bear: The Ongoing Military Operation in Chechnya* (Fort Leavenworth, KS: Foreign Military Studies Office, 1996); and appendix J: "Lessons Learned from Russian Military Operations in Chechnya 1994–1996," in Marine Corps Warfighting Publication 3–35.3, *Military Operations on Urban Terrain*.

[9] Shultz and Dew, 123; Oliker, 10–14.

[10] National Commission on Terrorist Attacks upon the United States, *The 9/11 Commission Report: Final Report of the National Commission on Terrorist Attacks upon the United States* (New York: Norton, 2004), 407.

[11] Shultz and Dew, 130.

[12] Marine Corps Warfighting Publication 3–35.3, 1-1–1-21.

[13] Carl von Clausewitz, *On War*, trans. Michael Howard and Peter Paret (Princeton: Princeton University Press, 1976), 80–81. Clausewitz is referring to *war* and not *warfare* in section 11. He clearly sees a distinction between the terms. While he believes the goal or object of war is the political objective, he believes it is the destruction of the enemy's means to resist (that is, his armed forces or, in his day, the enemy army) in warfare. In section 11, he refers to this as "the will to overcome the enemy and make him powerless." For a contemporary account of the disturbing propensity of modern policymakers to focus on the planning and conduct of war (that is, the means at the expense of the political objective), see Fred Ikle, *Every War Must End* (New York: Columbia University Press, 2005), 1–16.

[14] See Rupert Smith, *The Utility of Force: The Art of War in the Modern World* (New York: Vintage, 2008).

[15] Shultz and Dew, 131–136.

[16] For a discussion of hybrid or complex irregular warfare, see Frank G. Hoffman, "Complex Irregular Warfare: The Next Revolution in Military Affairs," *Orbis* 50, no. 3 (*Summer 2006).*

General Mattis

U.S. Air Force (Joe Laws)

USJFCOM Commander's Guidance for Effects-based Operations

By JAMES N. MATTIS

Herein are my thoughts and commander's guidance regarding effects-based operations (EBO). This article is designed to provide the U.S. Joint Forces Command (USJFCOM) staff with clear guidance and a new direction on how EBO will be addressed in joint doctrine and used in joint training, concept development, and experimentation. I am convinced that the various interpretations of EBO have caused confusion throughout the joint force and among our multinational partners that we must correct. It is my view that EBO has been misapplied and overextended to the point that it actually hinders rather than helps joint operations.

Therefore, we must return to time-honored principles and terminology that our forces have tested in the crucible of battle and that are well grounded in the theory and nature of war. At the same time, we must retain and adopt those aspects of effects-based thinking that are useful. We must stress the importance of mission type orders that contain clear commander's intent and unambiguous tasks and purposes and, most importantly, that link ways and means with achievable ends. To augment these tenets, we must leverage nonmilitary capabilities and strive to better understand the different operating variables that make up today's more complex operating environments.

My assessment is shaped by my personal experiences and the experiences of others in a variety of operational situations. I am convinced that we must keep the following in mind. First, operations in the future will require a balance of regular and irregular competencies. Second, the enemy is smart and adaptive. Third, all operating environments are dynamic with an infinite number of variables; therefore, it is not scientifically possible to accurately predict the outcome of an action. To suggest otherwise runs contrary to historical experience and the nature of war. Fourth, we are in error when we think that what works (or does not work) in one theater is universally applicable to all theaters. Finally, to quote General Sherman, "Every attempt to make war easy and safe will result in humiliation and disaster." History is replete with examples and further denies us any confidence that the acute predictability promised by EBO's long assessment cycle can strengthen our doctrine.

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The joint force must act in uncertainty and thrive in chaos, sensing opportunity therein and not retreating into a need for more information. USJFCOM's purpose is to ensure that joint doctrine smooths and simplifies joint operations while reducing friendly friction. My goal is to return clarity to our planning processes and operational concepts. Ultimately, my aim is to ensure that leaders convey their intent in clearly understood terms and empower their subordinates to act decisively.

While the North Atlantic Treaty Organization (NATO) and many partner nations have adopted the EBO nomenclature, NATO's policy focuses on the whole-of-government/Comprehensive Approach. In short, NATO's effects-based approach to operations (EBAO) does not fully mirror U.S. EBO. Thus I do not address NATO's use of EBAO in this USJFCOM commander's guidance.

This article explains my perspective and provides guidance on issues related to USJFCOM use of EBO, EBAO, operational net assessment (ONA), and system-of-systems analysis (SoSA) in future force development, training, and experimentation. Elements of these concepts have proven useful in addressing "closed systems," such as targeting, where effects can be measured per the U.S. Air Force's deliberate analysis and targeting methods. However, the concepts have been misapplied by others to operations beyond their original intent, resulting in overextension and confusion. Therefore, we will change course and provide the joint warfighter with a more balanced and understandable framework in which to plan, execute, and assess operations.

My Perspective

After a thorough evaluation, it is my assessment that the ideas reflected in EBO, ONA, and SoSA have not delivered on their advertised benefits and that a clear understanding of these concepts has proven problematic and elusive for U.S. and multinational personnel. For example, an analysis of the recent Israeli-Hizballah conflict found that the EBO "terminology used was too complicated, vain, and could not be understood by the thousands of officers that needed to carry it out."[1] In U.S. circles, elements of these concepts were prematurely injected into various joint and Service processes, resulting in inefficiency and confusion. This has resulted in an overall negative impact on joint warfighting. Regrettably, this confusion has also spread to our allies. While we have limited the impact of SoSA, ONA, and EBO within our own doctrine, confusion remains for many of our multinational partners. The U.S. Army, U.S. Marine Corps, and other observers have also concluded that EBO:

- assumes a level of unachievable predictability
- cannot correctly anticipate reactions of complex systems (for example, leadership, societies, political systems, and so forth)
- calls for an unattainable level of knowledge of the enemy
- is too prescriptive and overengineered
- discounts the human dimensions of war (for example, passion, imagination, willpower, and unpredictability)
- promotes centralization and leads to micromanagement from headquarters
- is staff, not command, led
- fails to deliver clear and timely direction to subordinates
- uses confusing terminology and is difficult to understand.[2]

The Israel Defense Forces' (IDF's) use of EBO during the Israeli-Hizballah conflict in the summer of 2006 is informative. Although there are several reasons why the IDF performed poorly during the war, various postconflict assessments have concluded that overreliance on EBO concepts was one of the primary contributing factors for their defeat.[3] After the war, one Israeli general observed that the new (EBO) doctrine was "in complete contradiction to the most important basic principles of operating an army in general . . . and is not based upon, and even ignores, the universal fundamentals of warfare. . . . This is not a concept that is better or worse. It is a completely mistaken concept that could not succeed and should never have been relied upon."[4] Other critical warfighting functions, such as campaign design and planning, combined arms training, command and control (C^2) relationships, and so forth, were overlooked or neglected in favor of EBO operating principles designed to create a "consciousness of victory" for friendly forces and a "cognitive perception of defeat" for enemy forces. This point is driven home in a study conducted by the U.S. Army Combined Arms Center, which noted that "EBO proponents within the IDF came to believe that an enemy could be completely immobilized by precision air attacks against critical military systems" and that "little or no land forces would be required since it would not be necessary to destroy the enemy."[5] This type of thinking runs contrary to historical lessons and the fundamental nature of war.

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Other critics of EBO have characterized it as overemphasizing precision air-delivered fires to the detriment of ground maneuver fundamentals. Precision fires alone proved to be ineffective during Operation *Desert Storm* in 1991, Kosovo operations in 1999, and more recently during the "shock and awe" phase of Operation *Iraqi Freedom*. The inconclusive results of these operations underscore the fact that effects-based operations tend to be ineffective when used exclusive of ground maneuver operations. The U.S. Army Combined Arms Center study also suggested that confusing EBO planning methods and new terminology resulted in imprecise and unclear instructions to subordinate commanders, causing various interpretations of what senior leaders wanted to accomplish. These examples, coupled with mediocre results in exercises, experiments, and current operations, bring into question the credibility and effectiveness of EBO as an operating concept, including when combined air-ground forces are employed.

Most warfighters acknowledge that elements of effects-based thinking, if used for targeting against closed systems, can have a positive influence on planning. For example, EBO has fostered a thorough examination of desired outcomes and possible consequences of actions. In particular, this has been true with respect to targeting and specific operations against well-defined, closed systems such as power grids, road networks, or railway infrastructure. EBO also caused a renaissance in combat assessment beyond

simple battle damage assessment and imparted an increased understanding of the impacts of our actions. However, "chaos makes war a complex adaptive system, rather than a closed or equilibrium-based system," which makes predicting, and then assessing, how physical actions cause behavioral effects a significant challenge.[6] There is also very strong agreement that any planning construct that mechanistically attempts to provide certainty and predictability in an inherently uncertain environment is fundamentally at odds with the nature of war. While many correctly argue that EBO has evolved to a much more "art of war" type of thinking, we must recognize that the term *effects-based* is fundamentally flawed, has far too many interpretations, and goes against the very nature of war to the point that it expands confusion and inflates a sense of predictability far beyond that which it can be expected to deliver.

Effects-based thinking and terminology have been used to describe the challenge of integrating diplomatic, informational, military, and economic (DIME) instruments of national power to create the necessary conditions for success. Coordinating DIME into a comprehensive approach to joint operations does not require effects-based thinking or a new lexicon; it does, however, require a firm educational foundation and the collaborative means to gain and maintain a shared understanding of the problem and complexity involved in developing comprehensive solutions. The best way to accomplish this is through effective campaign design, planning, and assessment as outlined in chapter 4 of Field Manual 3–24/Marine Corps Warfighting Publication 3–33.5, *Counterinsurgency*, and U.S. Army Training and Doctrine Command Pamphlet 525–5–500, *Commander's Appreciation and Campaign Design*.

We must return clarity to our planning processes and operational concepts, especially if we want to break down cross-governmental barriers. This clarity will better enable us to link "ends" to policy, strategy, campaigns, and operations through clear "ways" and "means." The use of "effects" has confused what previously was a well-designed and straightforward process for determining "ends." Furthermore, its use has created unrealistic expectations of predictability and a counterproductive information appetite in American headquarters. It requires unattainable levels of knowledge about the enemy exercising its independent will. The best way forward is to re-baseline our terminology and concepts by returning to time-honored principles, such as mission type orders, unambiguous commander's intent, and clear articulation of ends, ways, and means that have been tested in combat and are historically grounded in the fundamental nature of war while incorporating, where logical, the issues introduced by today's more complex environment.

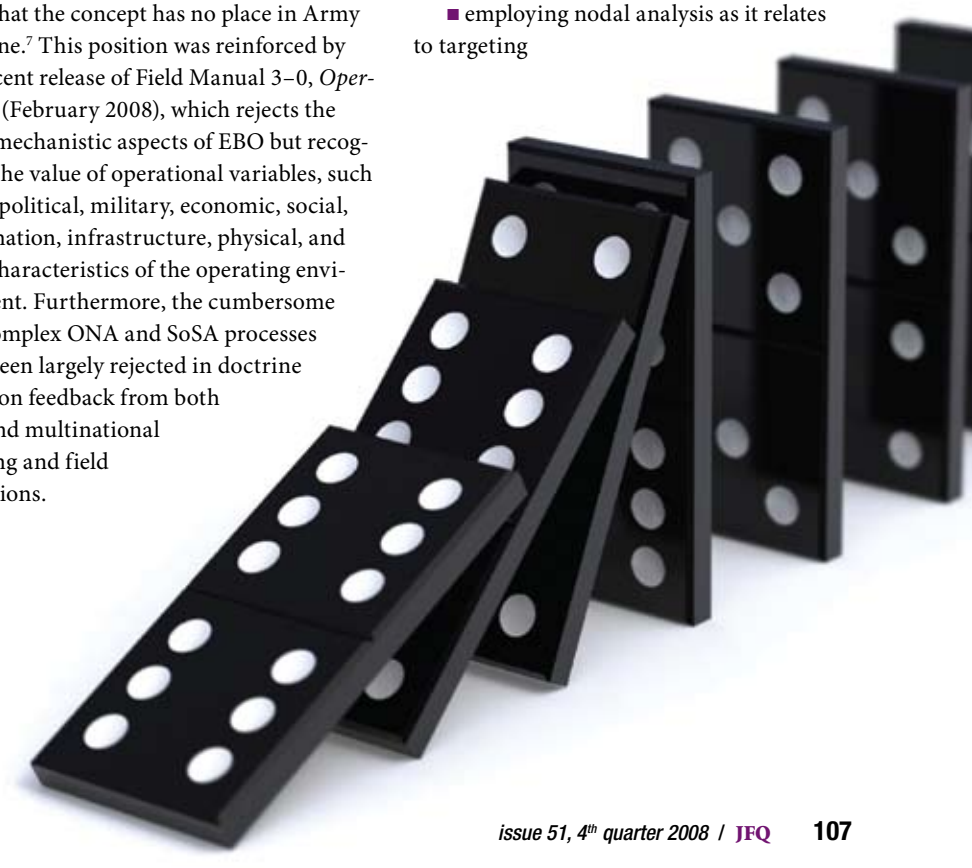
While the EBO concept has matured over the past few years, our experimentation and operations with it have fallen short of the mark. I agree with Justin Kelly and David Kilcullen that "while aspirations advanced by supporters of effects-based operations . . . are laudable they may not be achievable, particularly in the land warfare environment."[8] We are reminded that a concept contrary to war's fundamental nature will always come up short. Joint doctrine highlights the importance of *mission analysis* to understanding the nature of a given problem and the *purpose* of the operation. Within that context, current doctrine has properly retained the following ideas related to EBO:

- better understanding the history and culture of a society, interaction among military, interagency, and international organizations, socioeconomic makeup, political systems, and other factors in the operational environment
- using mission analysis to visualize and describe commander's intent, thus creating unity of action
- employing nodal analysis as it relates to targeting

any planning construct that mechanistically attempts to provide certainty in an inherently uncertain environment is at odds with the nature of war

Current State of "Effects"

One must ask the critical question: Is EBO even a viable operating concept? Joint Publication (JP) 3–0, *Joint Operations*, and JP 5–0, *Joint Operation Planning*, provide the current official perspective of the U.S. military's use of effects and related concepts in joint operations. These publications contain very little of the original deterministic EBO concept, though they do have some room for improvement in better clarifying existing effects-related terminology and explanations. Additionally, the U.S. Army distanced itself from EBO by concluding in 2007 that the concept has no place in Army doctrine.[7] This position was reinforced by the recent release of Field Manual 3–0, *Operations* (February 2008), which rejects the more mechanistic aspects of EBO but recognizes the value of operational variables, such as the political, military, economic, social, information, infrastructure, physical, and time characteristics of the operating environment. Furthermore, the cumbersome and complex ONA and SoSA processes have been largely rejected in doctrine based on feedback from both U.S. and multinational training and field operations.



■ conducting periodic assessments of operations to determine progress toward achieving objectives.

The Way Ahead

The underlying principles associated with EBO, ONA, and SoSA are fundamentally flawed and must be removed from our lexicon, training, and operations. EBO thinking, as the Israelis found, is an intellectual "Maginot Line" around which the enemy can maneuver. *Effective immediately, USJFCOM will no longer use, sponsor, or export the terms and concepts related to EBO, ONA, and SoSA in our training, doctrine development, and support of JPME.* Approved joint doctrine (specifically JP 3–0, *Joint Operations*, and JP 5–0, *Joint Operation Planning*) is the authoritative source for information on how we use effects in joint operations in terms of desired outcomes. As our concepts evolve, these documents must be further refined to comply with guidance contained in this article. We will continue to emphasize the art of command, the importance of proactive collaborative action with interagency and multinational partners, and comprehensive whole-of-government approaches to achieving our objectives.

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Acknowledging the unpredictability of war is fundamental to our view of future conflict. We seek to provide concepts and methods that will better enable us to find our way through the fog, friction, and chaos of warfare. We seek to smooth and simplify joint operations rather than complicate them. So we focus on the enemy, thereby reducing, rather than aggravating, our internal frictions. We seek to reduce friendly friction rather than to inject difficult-to-understand terminology and processes that demand increasingly large staffs to access effects and that tend to inhibit information flow and hinder rapid decisionmaking.

I want us to reinforce the reality that conflict is inherently complex and unpredictable. It is a nondeterministic human endeavor whose ramifications are never fully guaranteed because our adversaries have free will, which will inevitably impact the operating environment in unpredictable ways. Technology and training are key enablers to gain advantages over our adversaries, but no amount of technology or training will enable us to accurately predict reactions of complex systems. The enemy's free will, manifested by courage, imagination, resolve, and other human factors, denies predictability in most aspects of war. We must use focused training and technology-enabled solutions or problem-solving techniques to enhance initiative, pattern recognition, and decentralized decisionmaking. However, effects-based thinking and associated tools cannot be used as a substitute for creative campaign design and critical thinking. War is not composed of the tactics of targetry or an algebraic approach to measuring effects resulting from our actions, but rather operations guided by commander's intent and constant feedback loops. Furthermore, the centralized nature of EBO is inconsistent with the tenets of the U.S. Joint Forces Command C^2 vision, which places a premium on the importance of decentralized command and control as a means for resilient forces to prevail in chaos and degraded information environments.

Our goal is to develop a joint force that acts in uncertainty and thrives in chaos through a common understanding of the essence and nature of the problem and the purpose of the operation. In practice, this means that leaders must ensure their vision and intent are understood and their subordinates act decisively in concert with that vision and intent. As Clausewitz stated, the "trinity of chance, uncertainty, and friction [will] continue to characterize war and will make anticipation of even the first order consequences of military action highly conjectural." Taking a "systems approach to warfare where second- and third-order consequences of actions can be predicted, let along managed," is thus an illusion.[9]

Concepts and experimentation are intended to be innovative and must be pushed to their extremes. Most experiments fail, yet through failure springs success. That is acceptable and is part of the price we pay for unregimented thinking and open-minded, disciplined experimentation. That said, I want us to be mindful of the lessons of the past 7 years. If we made one mistake, it was that we fast-tracked some operational concepts and allowed them to gain inappropriate influence while unproven by history, experimentation, and current operations. We must be mindful that the world's militaries often look to the United States and USJFCOM for the way ahead, and history (including recent history) reminds us that there is a cost in lives, as well as mission failure, when concepts are misapplied. We must execute the processes that underpin this command's key functions with intellectual honesty, rigor, and discipline. We must clearly define the problems we are trying to solve and propose value-added solutions that have been properly explored, validated, and vetted. Our solutions must include clear language and terminology that promote shared understanding and enable subordinates to act, per commander's intent, without single point of failure reliance on technology or burgeoning headquarters. Lastly, decentralized decisionmaking, with emphasis on empowering subordinates' initiative in accordance with intent, clearly defined objectives, and executable tasks, is the best approach to achieve our goals. **JFQ**

NOTES

[1] Matt M. Matthews, *We Were Caught Unprepared: The 2006 Hezbollah-Israeli War*, The Long War Series Occasional Paper 26 (Fort Leavenworth, KS: Combat Studies Institute Press, 2008), 26.

[2] U.S. Army Doctrine Update #1, Combined Arms Doctrine Directorate, U.S. Combined Arms Center (Fort Leavenworth, KS: February 24, 2007); Effects Based Operations Conference, U.S. Marine Corps (Quantico, VA: September 7, 2005), slides 6–9.

[3] Avi Kober, "The Israeli Defense Forces in the Second Lebanon War: Why the Poor Performance?" *Journal of Strategic Studies* 31, no. 1 (February 2008), 16–28, 37–38; Israel Ministry of Foreign Affairs, Winograd Report, Information and Internet Department, January 30, 2008; Matthews, 23–28, 61–65.

[4] Matthews, 62.

[5] Ibid., 24.

[6] Justin Kelly and David Kilcullen, "Chaos Versus Predictability: A Critique of Effects Based Operations," *Australian Army Journal* 2, no. 1 (Winter 2004), 90.

[7] U.S. Army Doctrine Update #1, 4.

[8] Kelly and Kilcullen, 87.

[9] Ibid., 97.

DEA special agents and Afghan soldiers destroy hashish bunkers during Operation *Albatross*

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Whatever Happened to the "War on Drugs"?

By JAMES G. STAVRIDIS

U.S. Drug Enforcement Administration

Two important events last year received little fanfare. First, in March 2007, the U.S. Coast Guard, working with the Drug Enforcement Administration (DEA) and Panamanian authorities, seized the merchant freighter *Gatun*, bound for Mexico, carrying over 20 metric tons of cocaine—the equivalent of 10 Volkswagen Beetles. It was the largest maritime interdiction of drugs ever made in the Americas, and it denied drug lords over $300 million in revenue. It would be enough cocaine for all 17 million high school students in the United States to take eight hits of the drug.

Then in September 2007, Colombian authorities captured Diego León Montoya Sánchez, who was one of the world's most dangerous drug traffickers and was responsible for nearly two-thirds of the hundreds of tons of cocaine exported from Colombia each year. Experts attribute nearly 1,500 murders to this ruthless criminal. Through fear and corruption, Montoya, like Pablo Escobar before him, played a huge, destabilizing role throughout Latin America. His arrest marks a major milestone for Colombia—a nation that has labored for years to build a foundation for legitimate governance and rule of law.

Both events represent tremendous victories, but neither received significant notice. Twenty years ago, drugs were a leading concern in this nation, and solving the drug issue was a point of routine debate. Newspapers featured daily "drug bust" stories on the front pages. Every television station carried stories about the latest efforts in what was termed the "war on drugs." Congress easily passed the National Drug Control Act in 1992, creating the Office of National Drug Control Policy headed by a Cabinet-level official reporting directly to the White House. Presidential candidates debated the best approach to take in solving the drug problem. As recently as 2000, the movie *Traffic* was a box office and critical success, nominated for five Oscars and winning four.

Today, though, little is heard about the "war on drugs"—which was probably the wrong metaphor all along. Articles dedicated to the issue are relegated to the back pages, or they are at least six clicks away from the home page online.

Yet illegal narcotics remain a national threat of significant proportion. Drugs kill tens of thousands of U.S. citizens annually. They undermine fragile democracies throughout the Americas, with enormous negative consequences to our nation. Drug trading and its astronomical profits are fuel that drives the vehicle of nascent terrorism throughout the region. The distortions of and costs to the U.S. economy and that of the entire hemisphere are enormous.

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Here is a hypothesis: *Illegal drug use should return to the national spotlight*. Every bit of effort devoted toward solving the crisis of drug abuse in this country on the demand side, and preventing the flow of illicit drugs on the supply side, is effort well spent toward establishing control at our borders, stabilizing fragile democracies in our hemisphere, directly saving the lives of U.S. citizens, and enhancing our national security.

Challenges of Illegal Drugs

Here in the United States, drug abuse and related criminal activity have killed approximately 120,000 citizens since 2001. That is 40 times the number of deaths attributed to al Qaeda from the 1993 World Trade Center bombing, the 2000 bombing of the USS *Cole*, and the 9/11 attacks combined. Nearly 20,000 people die from drug abuse–related causes in the United States each year, probably half of them from South American cocaine.

The drug challenge is enormous, and the underlying threat is real. Why? The simple truth is that no business in the United States is more profitable than the illicit drug trade. What is the largest cash crop in the United States? Wheat? Corn? Soybeans? Wrong. It is marijuana. In fact, the total illicit drug trade equates to a $65 billion per year industry. When we add the resources we use to address health and crime consequences—as well as the loss of productivity suffered from disability, death, and withdrawal from the legitimate workforce—the total societal impact cost to our economy exceeds $240 billion annually and grows at the rate of 5 percent per year.

Moreover, the negative effects of the drug trade reach far beyond the sale and use of drugs in the United States. Throughout the Americas, drugs undermine fragile democracies. Today, 14 of the 20 nations that are the leading sources for drug shipments to the United States are located in the Americas. In source and transit zone countries throughout Latin America and the Caribbean, violent, well-organized drug traffickers use extortion, bribery, and payment-in-kind to fan the flames of corruption and violence. Their actions constantly chip away at the already weak rule of law, undermining governance in our neighboring nations.

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Additionally, global and regional terrorists rely on arms trafficking, money laundering, extortion, kidnap-for-ransom, and—above all—drug trafficking as their funding sources. Today, enormous profits from selling illegal drugs create huge amounts of money to finance crimes against our society. This money assists rogue states and international terrorist organizations that are determined to build and use weapons of mass destruction. In this sense, growing global demand for drugs such as cocaine, heroin, and marijuana inextricably links the world drug trade to international terrorism.

The stakes involved are astronomical. According to the 2007 United Nations World Drug Report, virtually all of the world's cocaine comes from coca leaf cultivation in Colombia, Peru, and Bolivia. Cocaine production estimates from these countries reached 984 metric tons in 2006. Worth nearly $21 billion wholesale, that amount of cocaine could retail on the streets in the United States for over $105 billion. The circulation of massive amounts of drug money is wreaking havoc on small economies in the Americas. Many of them face a death grip of corruption, greed, and violence.

On a personal level, drug trafficking is an industry that leaves human tragedy and a trail of blood in its wake. Humanitarian crisis follows the drug supply throughout Latin America and the Caribbean region. Drug kingpins are notorious for their horrendous record of abuses, including frequent kidnappings, brutal torture and murder, recruitment and use of child soldiers, and use of antipersonnel landmines. Widespread massacres, merciless killings, extortion, and forced seizure of land from civilians are common.

Cocaine trafficking from source countries in Latin America through the Caribbean to destinations in Europe and the United States remains the leading cause of most of the violent crime throughout the Latin American region. The current murder rate of over 30 per 100,000 inhabitants per year rivals the most troubled areas of southern and western Africa. Largely due to successful interdiction at sea and in the air, land routes through Mexico have become the primary route for South American cocaine into the United States. As a result, Mexico has found itself in the middle of an all-out war against competing drug lords. Cartels in northern Mexico seeking control of the lucrative drug trade have killed nearly 2,000 people this year alone.

Coastguardsmen aboard USCGC *Sherman* took part in record maritime seizure of cocaine from Panamanian-flagged vessel

U.S. Coast Guard

What's in a Name?

General Barry McCaffrey, during his tenure as the director of the Office of National Drug Control Policy under President Bill Clinton, stated, "The term 'War on Drugs' is inadequate as a metaphor. There can be no total victory and a military campaign is the wrong path to follow. Most of the people involved in drugs are not the enemy—they are the victims." His efforts led to a growing understanding of the requirements for and

benefits of national drug treatment programs, healing the addicts to reduce the appetite for drugs that fuels the industry.

Indeed, Latin Americans often ask why we in the United States fail to do more to curb the demand. In fact, the United States does attack the challenges on the demand side. Overall, this year the Federal Government will spend over $13 billion combating drugs, with state and municipal governments adding their own efforts. Over a third of that money is going toward programs to stop drug use before it starts and to intervene and heal habitual drug users. Drying up the demand is ultimately the best way to stop the flow of illicit drugs and help us secure our borders.

In addition to attacking the demand side of the drug problem, there is significant work on the supply side of the equation in the source countries. Programs for eradication, crop substitution, economic development, judicial and police training, and human rights education all play a part in reducing production of coca leaf. Both demand and supply efforts are vital and must continue.

Finally, alongside the important work on the demand and production side, there is opportunity to disrupt flow to the United States via *interdiction*, the process of stopping drugs moving through the transit zone between the producing countries and the market in the United States and Europe. While actual arrests are made by law enforcement authorities such as the Coast Guard and Drug Enforcement Administration, there is a significant support role for the U.S. military involving intelligence, information, logistics, sensor operations, patrol, and force protection for law enforcement authorities engaged in interdiction activities. Our job at U.S. Southern Command (USSOUTHCOM), for example, is detection and monitoring in the transit zone and supporting our partners in law enforcement. It is a crucial mission—one that receives a significant level of attention from our headquarters.

A Vital Mission

U.S. Southern Command is the military organization focused on the 45 nations and territories of Central America, South America, and the Caribbean. The area is vast, covering over 16 million square miles—one-sixth of the Earth's surface—and it is a region that is home to over 450 million people with a variety of cultures, languages, and histories.

From the headquarters in Miami, over 1,500 people make plans and lead the military activities of tens of thousands of dedicated military and civilians who fall under one-star to three-star component commanders from each of the armed Services and the U.S. Special Operations Command. On any given day, thousands of Soldiers, Sailors, Marines, Airmen, and Coastguardsmen are deployed in many countries throughout the region. In addition, thousands more are routinely deployed in our Navy and Coast Guard ships throughout the maritime domain. At USSOUTHCOM, we work hard with the entire interagency community to develop strategically important partnerships throughout the region for counterdrug control programs.

Each year, the President develops the National Drug Control Strategy, which is the Nation's plan for combating the use and availability of illicit drugs. The National Drug Control Strategy has three key elements:

- stopping use before it starts
- intervening and healing drug users
- disrupting the market.

The fiscal year 2008 drug budget totaled nearly $13 billion, with about $940 million—7 percent of the overall budget—under the auspices of the Department of Defense (DOD) for counterdrug operations.

The U.S. military's role in the drug control program was first mandated by legislation in the 1989 Defense Authorization Act, which directed DOD to assume the role as the lead agency for "detection and monitoring of aerial and maritime transit of illegal drugs to the United States."

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The monitoring and interdiction process is complex because it requires a mix of sophisticated technologies and capabilities. It is sensitive because of the connections that must be established for varied organizations and nations to work together without a comfortable margin of error. Interdiction also has to be dynamic; it deals with a highly capable foe with the capital to buy whatever it needs to adapt to changing circumstances.

One primary operations center for all of this is the Joint Interagency Task Force–South (JIATF–South), located in Key West. The task force's focus is both air and maritime smuggling through a 6-million-square-mile area called the transit zone. With the help of 11 partner nations, JIATF–South has evolved into a model of interagency and multinational cooperation that has achieved record-setting cocaine seizures in each of the last 6 years. Over the past 2 years, over 475 metric tons were seized, which equates to over 160 hits of cocaine for every high school student in the United States. This year, for the first time in a decade, we are beginning to see a rise in the street price of cocaine and attendant scarcity in a variety of large U.S. urban markets. Working together with demand and supply side solution sets, it seems that interdiction may be having an effect on the market. In addition, at a minimum, we know that there are 475 fewer tons of cocaine on our streets.

Innovation

Each year, in spite of our efforts, drug traffickers continue to prove that they are resourceful, dangerous, creative, and highly intelligent. The profits they receive from their business model drive adaptability and innovation, which in turn makes our job of trying to get a step ahead challenging. In the end, there seems to be no shortage of people willing to subject themselves to mortal danger or incarceration for the money drug trafficking can offer. There also seems to be no shortage of people willing to supply drugs. Worse, there seems to be no shortage of routes or methods traffickers will use to get their drugs into the United States.

We see feats of innovation month after month. For instance, there are people acting as drug "mules" on commercial airplanes, ingesting up to 90 sealed pellets of cocaine or heroin. A typical mule can carry about 1.5 kilograms, enough to bring in over $150,000 in retail sales. Also, there is the large-scale employment of semi-submersible watercraft, built to avoid detection from air and sea. A typical semi-submersible can carry between 1 and 10 metric tons of drugs. Moreover, there are creative ways to hide drugs in transport. Examples include:

- hidden in toys
- buried in iron ore

- stitched into live puppies and exotic animals
- encapsulated in the buttons of clothing
- mixed with coffee
- sealed in fruit juices and purees
- hidden in cargo holds of frozen or rotten fish
- dissolved in diesel fuel
- transformed into odorless plastic sheets, undetectable through chemical testing
- hidden in the shafts of golf clubs.

It is a boundless problem set. It is also classic 21st-century warfare—brain-on-brain combat. We must innovate in the way we think, organize, plan, and operate; in the way we adapt new technology to ever-changing challenges; and in the way we communicate, including how we describe and frame our challenges both with our partners and with the public in general.

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Clearly, in a resource-constrained world, we do not have the luxury to haphazardly throw away resources based on half-concocted notions, yet we must find ways to embrace change when it makes sense and have the courage to experiment. Like our opponents, we must constantly try new things. Now, more than ever, creative solutions are important.

To be more effective and efficient, we have to use nontraditional approaches to creating security in the region. This occurs largely by working with our regional partners abroad and interagency partners at home. We must strive to take advantage of every opportunity to build cooperative partnerships within our area of focus.

A New Kind of Ship. The high-speed vessel *Swift* embarked on a 4-month deployment in our region in the fall of 2007 for training and exchanges with partner nations. This deployment provided valuable lessons learned to help the U.S. Navy institutionalize the Global Fleet Station program, which will result in flexible forward presence options to conduct theater security cooperation activities. Although *Swift* is not a combatant in the traditional sense, its capacity, shallow draft, and incredible speed give this ship unlimited potential.

Originally designed as a high-speed car ferry, *Swift* is a 321-foot catamaran that can perform reconnaissance, mine warfare, maritime interdiction, transport, and humanitarian assistance. It travels at well over 40 knots and has a maximum draft of only 11 feet fully loaded with over 600 tons of cargo. *Swift* is relatively inexpensive by modern standards—less than $30 million per copy—but it is optimized for exactly the kinds of missions we do in this region, including counternarcotics. For example, with *Swift*'s speed and endurance, it can easily cover a lot of area fast—even the fastest drug running boats could not outpace it for long. Only through continued experimentation and deployment will we really be able to appreciate the incredible potential of this type of ship for use in maritime awareness and drug interdiction.

Precision-guided Intelligence. Each day, traffickers use more sophisticated communications, computer, and encryption technology to conceal operations. Moving resources at every sniff of a threat is not feasible; we need fast, flexible, and actionable intelligence that helps us pinpoint the locations where our forces and resources can do the most good and with sufficient time to get them there. To coin a phrase, we seek "precision-guided intelligence."

Data we use to gain intelligence about drug trafficking can come from many different sources, including radar, infrared, and visual reconnaissance assets, as well as human intelligence and databases compiled by law enforcement and customs services. In essence, we need more relevant technologies that allow all-source fusion, distributed dissemination, collaborative planning, and multiple-node sensor resource management. Here, we are looking to industry for smart solutions.

Innovation Cell Efforts. Combine all-source data fusion with inexpensive, reliable sensors, and we have the basis for true technological innovation in counterdrug efforts. At USSOUTHCOM, we have established a small innovation cell on the staff to research, explore, and test emerging technologies available commercially or through Federal research centers. In particular, the innovation cell is working closely with the Defense Advanced Research Projects Agency because of its specific role in managing and directing selected basic and applied research and development projects for DOD. Through this unique partnership, we are pursuing research and technology where risk and payoff are both high and where success may provide dramatic advances for the counterdrug mission. Examples include:

- unmanned aerial systems, especially those with the legs to have good transit and loiter capability
- remote laser infrared detection and ranging for foliage penetration

Sailors prepare to unload 23 tons of illegal drugs seized during multinational and interagency operations

U.S. Navy (Susan Cornell)

■ high-speed, unmanned surface vessels for detection and identification to support maritime domain awareness

■ commercial satellite sensors with the ability to detect go-fast boats.

With these types of innovations, our efforts against drug trafficking will no doubt improve, but innovation is never a one-way street. With every step forward, it is only a matter of time before resourced, intelligent drug traffickers respond with innovations of their own. Such a diminished effectiveness of each innovative leap over time is the exact reason why, at U.S. Southern Command, we must constantly strive for ways to do our job better.

Interagency Integration. Today, no single arm of the Federal Government has the ability or authority to coordinate the multiple entities required to execute an effective international antidrug campaign. But with just a little imagination, we can envision an operational fusion of the best capabilities provided by joint, U.S. interagency, international, and public-private organizations that seamlessly coordinates efforts to tackle drugs at every stage from source point to the streets. With such a capability at hand, even the most creative drug kingpins would be at a loss to accept the risks of continuing their trade. At U.S. Southern Command, we have begun a headquarters reorganization to accomplish this vision, which involves restructuring the large staff to optimize our interagency approach. It includes many new liaisons and personnel exchanges, as well as building directorates with interagency linkages.

A perfect example of an interagency approach is our partnering with DEA to leverage the technology, infrastructure, and legal domains required for real time leads to support drug trafficking interdiction and arrests. Our law enforcement agencies, including DEA, rely on sophisticated tools to stop major drug trafficking organizations. DEA has also developed advanced methods to compile investigative information, which ensures that all leads are properly followed and coordinated through its Special Operations Division (SOD). This mechanism allows all DEA field divisions and foreign offices to capitalize on investigative information from various sources on the spot as cases are developed. Numerous major Federal law enforcement cases have already been developed with the assistance of the SOD, which is increasingly a central player in cocaine, methamphetamine, and heroin investigations. Through an innovative partnership with DEA—and with other interagency partners—we hope to reap similar benefits in the drug-interdiction realm.

Innovative Communications. The essence of interdicting drugs is communicating fused intelligence where and when it is needed. The time is right to expand our technology base for building partnerships—to build upon a long history of friendship and cooperation—especially in a region where our position is largely won by words and trust, not bullets and missiles. At USSOUTHCOM, we have already started this process by providing a common communication system called the Combined Enterprise Regional Information Exchange System (CENTRIXS) to many of our partner nations. Each CENTRIXS node is part of a secure computer network that enhances operational situational awareness for everyone who is part of the link. It is connected with another innovative counternarcotics communication system known as the Counter-narcotic Information Exchange System (CNIES). We will continue to explore innovative communication strategies to increase interdiction efforts.

Sailor and Coastguardsman unload cocaine seized by members of Tactical Law Enforcement Team South

U.S. Navy (Timothy Cox)

A Look to the Future

At U.S. Southern Command, we work to develop strategically important partnerships throughout the region for source-country drug control programs and interdiction. The primary aim of these efforts has been to limit the availability of illicit drugs such as cocaine to drive up prices and discourage use. This is hard and important work, done at a very reasonable cost. Consider it a hedge to ensure that our Latin American and Caribbean neighbors remain friends and partners with whom we will continue to engage productively and sensibly.

Clearly, the drug threat to the United States is of enormous size and importance. It needs to be treated as such through a variety of solutions. Much of the work to be done is on the demand side, and there is a wide variety of policy ideas out there to address demand. On the supply side, there is much that can be done with producing nations to discourage growth and processing. Our focus in the military on detection and monitoring is likewise a part of the solution set. We should devote more resources to the problem of drugs in every dimension—demand, supply, *and* interdiction.

With a land and air border that extends over 7,500 miles, a maritime exclusive economic zone encompassing 3.4 million square miles, a vast number of people admitted into the United States every year, more than 11 million trucks and 2 million rail cars crossing our borders, and 7,500 foreign-flag ships making 51,000 calls in U.S. ports every year, it is easy to be overwhelmed by the magnitude of the drug challenge—if we think sequentially and in isolation.

But together, we can think, act, and work in parallel to solve the dilemma—by building partnerships that keep our borders open to legitimate trade and travel, while reducing the threat of drugs throughout our society. **JFQ**

Developing a Unit Language Capability for War

By HARRY D. TUNNELL IV

The Language Enabled Soldier (LES) program is a locally designed and implemented 10-month Arabic language and culture program for selected Stryker Brigade Combat Team (SBCT) Soldiers at Fort Lewis, Washington. The student body ranges in grade from private first class to lieutenant. The program is conducted by the Fort Lewis Foreign Language Training Center and was the initiative of the 4th Brigade, 2d Infantry Division (4/2 ID) (SBCT). Before deploying to Iraq, the team handed the program off to its sister brigade, 5/2 ID (SBCT). It is common among SBCTs to share lessons learned, and the LES program is no exception.

The original curriculum was developed in coordination with the language center and has been refined based on the needs of commanders and lessons gleaned from the Iraq theater. The center's staff and faculty maintain contact with deployed LESs and update the program of instruction appropriately. The interpreter/translator assigned to 5/2 ID (SBCT) serves as the noncommissioned officer in charge. He is a combination platoon sergeant for the students, military language instructor who refines the lessons based on his own combat experience, and point of contact for the brigade's leadership.

The concept began as a somewhat traditional Arabic language program. Based on feedback from deployed 4/2 ID (SBCT) LESs, however, it has evolved into more theater-specific training. For example, instructors have students in the parking lot practicing a car inspection in Arabic to prepare them for traffic control points, or working on verbal skills by interpreting for field grade commanders who are exercising their own negotiation skills. 5/2 ID (SBCT) has further refined the program so it is focused almost exclusively on the intelligence warfighting function. Today, in addition to 10 months of Arabic language training, Soldiers attend 1 week of predictive profiling training, part of which is in Arabic.[1] After their language and predictive profiling instruction, the students formally graduate and are ready to attend several follow-on courses.

Graduates take a specialized Red Team Mobile Training Team course taught by the Fort Leavenworth University of Foreign

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Soldier takes notes as village leader speaks to him through interpreter during home search

460th Space Communications Squadron (Dallas Edwards)

Military and Cultural Studies that trains them in non-Western decisionmaking. They subsequently attend Arabic media training so they are prepared when they see Arab journalists on the battlefield. Finally, one LES per company attends the Mirror Image course, which is terrorist immersion training. This Soldier is part of the company intelligence support team.[2] The current postgraduate sustainment program is conducted every Friday. We are exploring initiatives to expand it, including providing limited interpreter support to nonmilitary agencies that work with Arab communities in the Seattle-Tacoma area.

Evolving Operations

The LES is considered part of the intelligence warfighting function rather than merely a Soldier devoted to cultural awareness/understanding because 5/2 ID (SBCT) has adopted the Army's counterguerrilla doctrine in Field Manual 90–8, *Counterguerrilla Operations*. Counterguerrilla operations and counterinsurgency (COIN) share many disciplines, but the focus of counterguerrilla operations is the enemy, contrasted with the population-centric focus of COIN. Consequently, the training of the LES is not designed to help commanders gain an assessment of the needs of a population. 5/2 ID (SBCT) LESs are expected to look for and investigate indicators of enemy activity (based on an understanding of language, culture, and profiling), assist in the initial evaluation of information at or near the point of capture, question civilians (detainees remain the realm of military intelligence personnel), and deliver command messages to Arab media, among other things.

Notions about how to employ the LES continue to evolve. Lessons learned from 4/2 ID (SBCT) will be important, as is the concept of counterguerrilla operations. Since Iraqis have been conditioned to the fact that few American Soldiers have a working knowledge of Arabic, there may be great potential to use the LES in an eavesdropping role as well as overtly during patrolling. For instance, the Soldier can be employed as a stoic guard on an objective or elsewhere and monitor conversations between unsuspecting detainees. An LES from another battalion can be requested by a commander to assess the reliability of locally hired interpreters (since the language skills of this Soldier will be unknown to the local hires). LESs are going to be taught Arab children's games, so they can interact with children in a nonthreatening way on an objective, at a medical civil action program (MEDCAP), or during other events. Parents who see Soldiers interacting with their children in a benign fashion might be more forthcoming. Children, while not the object of an intelligence activity, have often proven to be a sound source of information. There are innumerable ways to take advantage of an enhanced language capability; one only needs a little imagination.

there may be great potential to use the Language Enabled Soldier in an eavesdropping role as well as overtly during patrolling

Positive Effects

An adjunct feature of the language and culture capacity is improved negotiation ability throughout the brigade. Senior commanders normally have someone available to help them prepare for meetings with indigenous personnel, but company commanders are usually on their own. Company Equal Opportunity Leaders (EOLs) in the brigade attend a Washington state mediation training program. This not only certifies them to perform mediation but also easily translates into a basic understanding of how to prepare for a negotiation. The expertise of the EOL, combined with the cultural understanding of the LES, can be an important tool for a company commander. The LES and the EOL as a team help company commanders prepare for bilateral negotiations with indigenous leaders.

LESs have the potential to offer a unit extraordinary resources; however, commanders and leaders must believe in the program. Because Iraq is such a lethal environment, it is difficult to convince Soldiers and leaders that they should send someone to Arabic class for nearly a year rather than to tactical training. We have noticed that since LESs enhance counterguerrilla operations—which focus on the enemy and are thus considered intelligence activities rather than enablers for COIN or stability operations—Soldiers and unit leaders have come to understand the program readily enough for it to succeed.

In cases when someone does not accept the importance of the training, there is sufficient command emphasis on it that the concept is well protected. The brigade commander and all battalion commanders attend weekly Arabic language and culture training as the leader component of the LES program. Battalion commanders personally interview LES candidates. The noncommissioned officer in charge has direct access to the brigade command sergeant major and is expected to rapidly identify points of friction. The brigade intelligence and operations officers work closely together to manage the requirements of the program. There is no doubt that the program is the brigade commander's priority.

After 10 months, the concept has been accepted by subordinate units within the brigade. There are indicators of approval. Commanders routinely monitor the academic progress of their Soldiers. Units will ask to have a class to support local field training exercises as role players and LESs. The brigade's initial goal was to have 80 students in the program. After achieving that, battalion commanders requested or voluntarily supported several additional classes. There are now 106 Soldiers who are part of the program as students or graduates, and another class began in June 2008. A further indicator that the program has value is that after the first class graduated, one battalion had its two graduates in the field

Solider adds Arabic phrases to quick-reference book

U.S. Air Force (William Greer)

the next day to support unit external evaluations, one serving as a company commander's interpreter and the other role-playing an Iraqi doctor on a MEDCAP site.

One of the best endorsements of the program came from a sergeant with two Iraq combat tours. He remarked that he wanted Americans in his unit who spoke Arabic; he did not want to rely on unknown locally hired civilians. The point is important and powerful; we would never contract civilians to man a platoon's machineguns, after all, so why rely on them for language and cultural skills? If we buy into the idea that our nation is at war with Islamic totalitarian terrorists and that culture and language are a weapons system important to victory, training Soldiers to operate this weapon cannot be considered an annoying or unreasonable detractor from core missions. The LES is as important to defeating today's enemy as anyone trained to handle critical combat equipment.

Focus on Intelligence

The LES program supports counterguerrilla operations by being a battle-focused program that is increasingly considered necessary to understanding adversaries and bridging the human terrain to get at them. Leaders need to understand the subtle but important distinction between this program and a COIN, stability, or counterguerrilla operations strategy. Units that desire to employ a COIN or stability operations–focused concept will have to organize and train formations to provide security, essential services, government legitimacy, police and military capability, and so forth. This is considered an indirect strategy to attack a guerrilla, insurgent, and terrorist enemy. The language and cultural understanding requirements to implement such a strategy are enormous. They will also be different and will have to focus, for example, on skills associated with infrastructure development rather than profiling.

Soldier receives Arabic lesson from Iraqi schoolchildren

U.S. Navy (Sean Mulligan)

Counterguerrilla operations, in contrast, center on the enemy, so *intelligence capability throughout the formation* is emphasized. When properly conducted, counterguerrilla operations defeat or destroy the enemy, which has a direct and immediate impact on improving security and indirectly advances essential services, government legitimacy, and police and military capability. Because the principal focus of counterguerrilla operations is fundamentally different from COIN and stability operations, the scale of the requirement is different. The current 5/2 ID (SBCT) program will eventually yield about 120 Soldiers trained in Arabic language and culture—3 percent of the brigade's strength. While this is enough to significantly improve intelligence capability at every echelon, it does not scratch the surface of the requirement for COIN, based on the operating principles established in the Army's own doctrine. Twenty percent or more of the formation would probably need to be trained in Arabic to have the level of cultural understanding the Army's new COIN doctrine implies is essential.

When all is said and done, the initial training of Language Enabled Soldiers takes students away from their units for almost a year. The subsequent sustainment training is also time-intensive. However, the price is well worth it; American lives will be saved by improved situational understanding, and there will be a far more efficient and refined ability to attack terrorists, guerrillas, and insurgents. Graduates improve every day they use their language and observation skills, which is another combat multiplier. In a counterguerrilla environment, the Language Enabled Soldier is as essential as any other part of the intelligence warfighting function, and every Soldier who matriculates from the program reduces the adversary's ability to evade the brigade. This unusual language potential will diminish enemy capability while at the same time enhancing our own. But the most compelling feature of these uniquely trained warriors may be, as a command sergeant major put it, that the Language Enabled Soldier "is the only weapon we have that learns." **JFQ**

NOTES

[1] Predictive profiling teaches students how to identify indicators of suspicious activity.

[2] Each company has an intelligence support team to conduct an initial analysis of combat information. The team consists of an LES, a tactical site exploitation technician, and an intelligence analyst (a nuclear, biological, chemical noncommissioned officer retrained by a Fort Huachuca mobile training team).

Al Qaeda
Refining a Failing Strategy

By MARTIN J. HART

Martin J. Hart is an Intelligence Analyst with the Central Intelligence Agency.

Al Qaeda's inability to translate its post-9/11 approval in the Muslim world into a mass movement jihad against the West is prompting a search for new ways to regenerate lost momentum, but the group's inherent weaknesses are likely to prevent progress and gradually discredit its vision for the future of Islam. Al Qaeda's long-term plan—according to the writings of its core leaders, Osama bin Laden and Ayman al Zawahiri—is to move from a small vanguard movement to the leadership, at least at a nominal level, of a global Islamic insurgency in order to destroy Western influence in the Muslim world and reestablish the historic caliphate.[1] Although many Muslims viewed al Qaeda's early attacks as heroic acts of defiance against unjust U.S. policies, al Qaeda has failed to make the transition to a popular insurgency or win any permanent gains as a result of its conceptual, organizational, and material shortcomings. These include an overreliance on violence, weak efforts to organize

1st Combat Camera Squadron (Cedric H. Rudisill)

Damage to Pentagon after September 11 attack

political support in the Muslim world, a small and diffuse cellular structure, and insufficient safe havens and state sponsorship.

Because these weaknesses have their roots in al Qaeda's radical founding ideology, the group is unlikely to correct them quickly, if at all, and they will undermine any plans to regain the initiative. For instance, although al Qaeda writings show a realistic streak in recognizing the need for operational level adjustments, at the strategic level the group's leaders rigidly believe that violence is a religious obligation, alliances with Muslim "apostates" should be eschewed, and victory is inevitable.[2] Moreover, al Qaeda's religiously based disdain for the materialist aspects of its enemies, both Muslim and Western, will continue to cause the group to underestimate the resilience of its opponents. As a result, any new plans are likely to be neither completely flexible nor fully realistic. They will contain a continuing mismatch between grandiose aims and inadequate strategic concepts and means. Nevertheless, some of al Qaeda's weaknesses, including its rigid worldview and cellular structure, lend the group a measure of determination and survivability that will make its eradication a difficult process that may take decades.

Flawed Strategy

As Western strategic thinkers have observed, for a nation or group to be militarily effective it must harmonize tactics, operations, strategy, and policy goals, paying particular attention to strategy as the critical bridge between policy goals and military means.[3] So far, al Qaeda's key strategic concept—fomenting a multistage insurgency against the West and its allies across the Islamic world—has failed to provide this bridge. The group has been unable to knit together its limited tactical means and moderate propaganda capability with its messianic goals.

Al Qaeda's policy goal is to establish a single Islamic fundamentalist government in the territories previously controlled by the historic caliphate or currently containing large Muslim populations—a region stretching from Spain and the Balkans in the west to Indonesia and parts of the Philippines in the east.[4] This government would be based on Sunni Salafist principles, including a return to the practices of Muhammad's first and "most pure" followers, rigid adherence to shariah law, jihad against unbelievers and apostates, and rejection of Western social values. Salafists believe that deviation from "true" Islam is responsible for the loss of Muslim power in the world and that a return to "purist" principles is necessary to restore Islam to its "rightful" position.

Although these goals may appear to Western eyes as so ambitious that they strain credulity, even when viewed as propaganda for eager Islamic militants, al Qaeda believes they are not only possible but also preordained by Allah.[5] Al Qaeda leaders admit that the disparity in material power between the jihadists and the West necessitates a prolonged struggle, but they also maintain that, because Allah is on the side of the jihadists, the only prerequisite for victory is dedication to jihad—or violent action persistently applied.[6] Intelligently applied violence and adroit propaganda campaigns may speed victory, but al Qaeda leaders do not believe clever strategy is as important as faith and action.

Nevertheless, al Qaeda does have a strategy—to try to foment a global Islamic insurgency in four stages. According to multiple writings by prominent al Qaeda thinkers—including Abu Bakr Naji's *The Management of Savagery*, Zawahiri's *Knights under the Prophet's Banner*, and Abu Hajir al Muqrin's *A Practical Course for Guerrilla War*—the first stage is the awakening. During this phase, al Qaeda doctrine calls for small terrorist cells, funded and directed by al Qaeda's central apparatus, to conduct spectacular mass-casualty attacks against symbolic U.S. targets and other sources of preexisting Muslim resentment to lift what al Qaeda considers a malaise of Islamic defeatism.[7] Al Qaeda believes such violence can radicalize the Muslim population in a way that simple proselytizing cannot. Naji, for example, calls this "reviving dogma and jihad in the hearts of the Muslim masses" and removing the "deceptive media halo" around American power.[8]

Smoke rises over Manhattan 4 days after attack on World Trade Center

U.S. Air Force (Michelle Leonard)

Osama bin Laden poster

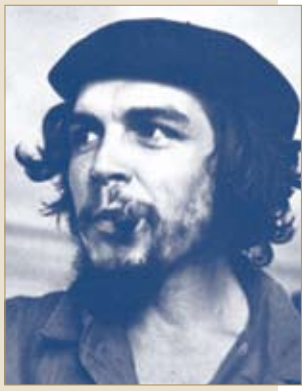
DOD

In designing this stage, al Qaeda leaders have shown a keen understanding of the pent-up frustrations and humiliations felt by many young Muslim men. These feelings have been developed through personal experiences similar to Zawahiri's torture in Egyptian jails, vicarious experiences of television images of the Palestinian intifada, or simply the affront to personal identity and self-worth resulting from repeated encounters with the superior success of the West. Zawahiri and bin Laden understand that these sentiments can be tapped by inspirational examples of successful attacks and the explanatory power of their ideology, both of which declare that a return to "authentic" Islam that battles the "corrupting" influence of the West will restore Muslim pride. In this way, the genesis of al Qaeda's terrorism is similar to that of other groups: its violence is an expression of individual frustration, an assertion of peer group identity against threatening outsiders, and the organization's means to influence enemies and gain supporters.[9]

According to Zawahiri, the aims of this stage are to rally Muslims to the al Qaeda banner and boost resources available to the organization—volunteers, monetary donations, and support of similarly minded terrorist groups.[10] Zawahiri and bin Laden hoped that the attacks leading up to and including 9/11 would force either a humiliating U.S. retreat from the Muslim world, for which al Qaeda could claim credit, or a direct U.S. military intervention, which al Qaeda would then propagandize as a "Crusader invasion" to mobilize massive numbers of Muslim volunteers.[11] Some al Qaeda lieutenants also hoped that Washington would compel pro-U.S. Muslim governments to publicly act against militant groups, thereby associating these regimes with subservience to American actions against fellow Muslims and providing Muslims another reason to act.[12] This cycle of actions would widen the scope of conflict and provide real-world combat experience for growing numbers of militants. According to Zawahiri, militants "need to inflict maximum casualties . . . concentrate on martyrdom operations" and choose targets that "restore the struggle to its real size [that is, provoking a type of clash of civilizations]."[13]

In the second stage, al Qaeda aims to harness this militancy by establishing new cells and connecting with like-minded groups, such as Southeast Asia's Jemaah Islamiyah, to expand attacks on Western targets and erode U.S. popular will to remain engaged in the Middle East. Naji and al Muqrin suggest that militants attack U.S. economic interests abroad, such as oil facilities, judging that the West's materialist culture cannot abide much economic pain before demanding changes in U.S. policies perceived as prompting the attacks. According to Naji, "aiming blows of vexation directly toward the economy is the most important element of cultural annihilation since it threatens the opulence and [worldly] pleasures which [Western societies] thirst for."[14] Al Muqrin explains that the uncertainty these attacks produce would roil Western economies disproportionately to their physical damage.[15] Al Qaeda's call for inflicting heavy casualties on U.S. military forces in the Middle East stems from a similar belief that U.S. culture cannot stomach the loss of more than a few American lives. Naji writes, "If the number of Americans killed is one tenth the number of Russians killed in Afghanistan and Chechnya, they will flee, heedless of all else. . . . They have reached a stage of effeminacy which has made them unable to sustain battles for a long period of time."[16]

Roots of al Qaeda Strategy



Al Qaeda's strategy is essentially a variation of the "foco" strategy practiced by communist insurgent Che Guevara in the 1960s, which holds that a vanguard group can use violence to create the political and psychological conditions that give rise to popular revolution. Al Qaeda intellectuals have studied the guerrilla theories of Mao Tse-tung and Che and have sought to integrate these ideas with their own experiences—primarily the Afghan war against the Soviets. Bin Laden, Zawahiri, and others saw the Soviet invasion of Afghanistan enflame Muslim passions, attract jihadist recruits from across the world, and lead to the defeat of a superpower. As Zawahiri writes, the Afghan "jihad was a training course of the utmost importance to prepare Muslim mujahidin to wage their awaited battle against . . . the United States." Che, however, was famously unsuccessful in his attempt to use the foco strategy in Africa and Bolivia because a belief in the righteousness of his cause and the memory of singular success in Cuba clouded his judgment and encouraged him to believe in his theory's universal applicability. Something similar afflicts al Qaeda's judgment and application of the "lessons" of the Soviet-Afghan war.

al Qaeda doctrine calls for attacks against sources of preexisting Muslim resentment to lift what al Qaeda considers a malaise of Islamic defeatism

Al Qaeda intends to exploit weakening U.S. prestige during this stage to break the bonds between America and its allies, especially in the Middle East. The organization hopes that the casualties and economic pain inflicted on the United States will prompt isolationist tendencies among Americans, thereby separating pro-U.S. Muslim governments from U.S. support.[17] The group also hopes an image of American weakness would reduce the confidence that U.S. allies have in the benefits of ties to Washington. As Naji makes clear, this aspect of al Qaeda strategy

stems from a belief in the Afghan mujahideen's central role in the destruction of the Warsaw Pact as a result of the Soviet-Afghan war: "By removing respect for the Russian army from the hearts of the masses whose regimes used to revolve in [the Soviet] orbit in Europe and Asia . . . one after another, they began to fall away and desert it."[18]

The third stage—which Naji calls "the management of savagery" and from which he draws the title of his book—is the establishment of safe havens that would allow al Qaeda to build large training camps, conduct logistic support activity more openly and efficiently, and dispatch fighters to neighboring countries to expand the group's influence. These areas would be created by defeating local security forces or exploiting already ungoverned areas. In this stage, al Qaeda would control one or more "liberated" zones, as described in traditional insurgent doctrine, and therefore be compelled to provide basic government services for people living in the area, indoctrinate the masses, develop a rudimentary internal security force, and secure and expand the zone against outside pressure.[19]

Naji calls this stage the most critical because of the safe haven's contrasting vulnerability and potential for wider success. He recognizes the danger of weak insurgent forces expending scarce resources on population administration while simultaneously trying to defend territory and export the movement to other areas. Nevertheless, he also sees the maintenance of a safe haven as "the bridge to the Islamic state which has been awaited since the fall of the caliphate."[20]

The fate of Iraq looms large in this stage, since Zawahiri has long emphasized the importance of al Qaeda gaining a territorial foothold more centrally located than its previous base in Afghanistan: "The mujahid Islamic movement will not triumph against the world coalition unless it possesses a fundamentalist base in the heart of the Islamic world."[21] In 2005, bin Laden and Zawahiri called on al Qaeda in Iraq (AQI) to prepare to consolidate a safe haven in the country. Zawahiri warned that the group needed to be ready to handle a precipitous U.S. withdrawal by preventing Sunni tribes, Shia militias, and other native elements from squeezing out al Qaeda.[22] Although AQI tried to do this—renaming itself the Islamic State of Iraq to be seen as an inclusive and indigenously led organization, for example—it failed to broaden the group's appeal.[23]

the third stage is the establishment of safe havens that would allow al Qaeda to dispatch fighters to neighboring countries

The transition from safe haven to the fourth stage of creating an Islamist state is not well articulated in al Qaeda literature, probably because more thought has been given to conducting the current fight with its more definable parameters, but some al Qaeda writings on the subject are available. Al Muqrin's *Guerrilla War* holds up the Taliban's rise to power in Afghanistan as a possible model, describing the Taliban victory over the post-Soviet government as a series of small battles that acquired increasing amounts of territory and eventually broke the government's will.[24] In this scenario, no decisive conventional offensive is envisioned as necessary for installing Islamists into authority, only a power vacuum in the political center. Naji writes that if an opposing government is weak enough and the surrounding pro–al Qaeda forces strong enough, assassination of key enemy leaders may precipitate the collapse.[25]

A group as diffuse and nonhierarchical as al Qaeda will vary its application of this strategy. Operatives strike at targets of opportunity and different militant writers

Al Qaeda's WMD Option

Al Qaeda's material shortcomings will limit its weapons of mass destruction (WMD) development and employment options. There is no credible evidence that the group possesses more than a small-scale chemical weapons capability, demonstrated in captured video showing a dog dying in a cloud of unidentified white vapor.[1] According to the director of the Defense Threat Reduction Agency, al Qaeda had limited development capabilities in Afghanistan before the U.S. invasion, and since then its lack of money and unstable safe havens have probably exacerbated problems with the internal-development option.[2] Nevertheless, the revelation in the 1990s of a network run by Pakistani scientist A.Q. Khan—in which nuclear weapons knowledge and technology were sold to Iran and North Korea—shows the possibility of religiously, politically, and financially motivated transfers of WMD knowledge, and potentially capability, to al Qaeda.

There also is little indication how al Qaeda might prioritize WMD acquisition or use WMD operationally. Al Qaeda's most frequent WMD references are to chemical weapons development and use, but nuclear, biological, and radiological weapon acquisition efforts are possible, despite their low likelihood of success. Al Qaeda's desire to justify WMD use to Muslim audiences may focus its targeting on U.S. military assets on American soil (a re-attack on the Pentagon with WMD, for example) and possibly Israel, if operationally feasible. Use against civilians would not gain more media coverage and could alienate its remaining Muslim supporters.[3]

[1] Jack Boureston, "Assessing Al Qaeda's WMD Capabilities," *Strategic Insight* 1, no. 7 (September 2002), 3, available at <www.ccc.nps.navy.mil/si/sept02/wmd.asp>.

[2] Ibid.

[3] Jerry Mark Long, "Strategic Culture, Al-Qaida, and Weapons of Mass Destruction," report prepared by Science Applications International Corporation for Defense Threat Reduction Agency, November 20, 2006.

break down or aggregate the stages differently, sometimes mixing the first stage "awakening" and second stage attrition of U.S. power. Also, because real-world application of strategic theory is seldom as neat as it appears on paper, these stages often overlap in different areas at different times. For instance, al Qaeda continues to try to wear down U.S. forces in Iraq while building a safe haven in the Pashtun tribal area of northwestern Pakistan.

Weakness Limits Growth

Despite the energy devoted to developing and implementing its strategy, al Qaeda's inherent weaknesses prevent it from reaching the strategy's penultimate goal—the creation of a global Muslim fundamentalist insurgency. As can be seen in each of the stages described above, al Qaeda's core weakness is its ideologically based overreliance on violence, which limits its strategic flexibility, ability to attract a large Muslim following, and capacity to consolidate early success (such as in Iraq). Moreover, al Qaeda's idea that violence can spark a global clash of cultures tends to obscure the need to understand local conditions where the group hopes to nurture branch al Qaeda movements. Without a more flexible strategic concept, al Qaeda will remain unable to grow beyond a cell-based terrorist network.

Thus far, al Qaeda has not shown any ability to create a broadly appealing vision for the future or cement the loyalty of more than a small number of dedicated jihadists. Even in Afghanistan, where al Qaeda and the Taliban had years to do their proselytizing, al Qaeda ideologue Abu Musab al Suri complained that friendly tribal groups quickly surrendered or betrayed al Qaeda members to U.S. forces during the post-9/11 invasion of Afghanistan.[26] Bin Laden and Zawahiri have vacillated between publicly criticizing the failure of Muslims to rally to the anti-Western cause and recognizing the need to craft better appeals to mass Muslim audiences, to little effect thus far.[27]

Part of the problem is that al Qaeda's vision of a global religious movement causes it to eschew ethnic, nationalist, political, and economic appeals in favor of fundamentalist and anti-Western appeals, despite the fact that insurgencies featuring ethnonationalist appeals have proven the most successful over the past century.[28] The education given to most al Qaeda militants, according to bin Laden's former bodyguard Abu Jandal, includes putting "the issue of nationalism . . . out of our minds."[29] Al Qaeda's response to conflict in Iraq between local nationalist insurgents and nonindigenous al Qaeda cell leaders was to create a fictitious native Iraqi leader named "Abu Omar al Baghdadi" to front for AQI—hardly a systematic solution.[30] Even in Saudi Arabia, with its conservative Wahabi religious tradition, many people publicly criticized al Qaeda militants after their attempts to damage the country's oil facilities.[31]

As a result, al Qaeda has remained an elitist movement that draws general Muslim approval for trying to reduce U.S. power, but it fails to attract participation from most Muslims because of its hardcore fundamentalist message. According to Christopher Henzel's study of the origins of al Qaeda's ideology:

For all the importance that Zawahiri attaches to political action and organization among the masses, the revolutionary Salafists have aroused . . . little popular response to their efforts. In his 2002 book Jihad: The Trail of Political Islam, *Gilles Kepel argues convincingly that contemporary political Islamist movements can succeed only when they are able to mobilize, and maintain an alliance between, the masses and pious middle classes. Natural tensions between the two constituencies are inherently difficult to control and are repeatedly the downfall of contemporary political Islamist movements, most notably in Algeria.*[32]

Al Qaeda's overreliance on violence also has contributed to its neglect of the political organization necessary to harness any popular support that might be generated by an improved message. Al Qaeda's small clandestine structure has no ability to indoctrinate, organize, discipline, or direct large numbers of Muslims or engage in mass dissident activities, such as riots or demonstrations. Radical mosque and religious school (*madrassa*) leaders, combined with Internet and broadcast videos glorifying attacks on Western forces, may generate a few recruits, but without a semi-overt political organization able to communicate quickly and frequently with large numbers of people, al Qaeda is unlikely to produce mass activism in any form, violent or nonviolent. On the other hand, Hizballah, which some analysts have called the world's most effective Islamic insurgency, has built an efficient grassroots organization on Lebanese territory with strong government-like social services.[33]

al Qaeda has remained an elitist movement that draws general Muslim approval for trying to reduce U.S. power, but it fails to attract most Muslims because of its hardcore fundamentalist message

Iraqi citizen talks to Iraqi and U.S. soldiers

U.S. Army

Even worse for al Qaeda, its ideology of violence reduces the pool of potential allies and arouses enemies, limiting its freedom to operate. Although al Qaeda maintains ties to like-minded Islamist terrorist groups, its ideologues have dismissed other anti-Western groups. Bin Laden and Zawahiri have criticized the Muslim Brotherhood for "confusing" Muslims with ideas on nonviolent religiously based change. Even Hamas, a violently anti-Israeli Palestinian organization, comes under verbal al Qaeda attack for participating in Western-style elections and moderating its violence for "ephemeral" political gains.[34] In turn, groups such as Hamas and Hizballah have avoided close ties to al Qaeda, probably over concern that such links would create more Western and regional opposition to their activities without any compensating benefits. Meanwhile, al Qaeda attacks have awakened local security services such as those in Saudi Arabia, which were willing to ignore militant activities directed against theaters abroad until the al Qaeda faction in Arabia began strikes against economically vital oil facilities.[35]

Another crucial al Qaeda weakness is its lack of material resources. Most successful insurgencies receive material assistance, political support, and a measure of international legitimacy from one or more nation-states. Hizballah, for instance, gains great material benefit from Iran and Syria. Al Qaeda has no state sponsor and must rely on wealthy like-minded Muslims, illegal contributions from some Muslim charities, and criminal enterprises such as drug dealing and kidnap-ransom schemes in Iraq to generate money to travel, buy weapons, and generally support itself. According to unnamed U.S. intelligence officials quoted in the *Los Angeles Times*, al Qaeda's core leadership, rebuilding its former Afghanistan safe haven in Pakistan's tribal areas, is limited in the funds it can disburse to cells abroad and is surviving on money from criminal enterprises in Iraq.[36] These funds are relatively small, sent in tranches of several tens of thousands of U.S. dollars, and some of it probably goes to ensuring the goodwill of Pakistani tribal allies.[37]

Strength Ensures Survivability

Unfortunately, these weaknesses do not mean al Qaeda will quickly collapse because its countervailing strengths—a dispersed organization and an ability to attract groups, however small, of highly motivated young men—invest the organization with considerable survivability and resiliency. Al Qaeda maintains a network of geographically dispersed clandestine cells that often operate without knowledge of each other to boost security. Although these cells increasingly function without support from al Qaeda leaders, they have become financially self-sustaining and draw some operational benefits from Web-based doctrine, training manuals, and propaganda. This type of structure may inhibit sophisticated large-scale operations, but it makes the organization difficult to identify and roll up as a whole.

The other great strength of al Qaeda is its determination to continue the fight, expressed in its guerrilla war concept and supported by its religious belief in preordained victory. Because group members face long odds for personal survival and see ultimate victory as a distant prospect, there are no "free riders" attracted to material benefits the group might provide. Thus, most members are likely to be highly motivated.[38] This mindset gives al Qaeda operatives mental resilience in the face

U.S. flag waves over abandoned fighting position overlooking Bagram, Afghanistan

982d Combat Camera Squadron (Michael Bracken)

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of setbacks, making it difficult for the West to inflict a decisive psychological defeat. It also makes defections unlikely and recruiting al Qaeda personnel into Western intelligence networks problematic.

Trying to Adapt

In the months ahead, al Qaeda is likely to try to leverage these strengths to regain momentum in the area that al Qaeda writings consider most vital and where both threats and opportunities are most fluid—the Middle East; but the group's mindset is likely to limit new plans to the operational level and prevent the development of new strategic paradigms. The main change is likely to be more targeted violence and more sophisticated media campaigns to gain quick political and psychological victories in the region.

Given al Qaeda's aim of gaining a safe haven in the heart of the Middle East and the fading opportunity to secure one in Iraq, the group may seek to influence the U.S. Presidential election by increasing attacks on American forces in Iraq and thus the attractiveness to U.S. voters of candidates calling for quick withdrawal. Following the success of the U.S. military "surge" in reducing violence in Iraq, such a strategy may be calculated to have a "Tet-like" psychological impact—highlighting the cost of continued involvement and the difficulty of achieving lasting stability, while prompting Western media claims that White House statements of progress are unwarranted. Although it is difficult to gauge the potential political effectiveness of renewed attacks in Iraq, studies of Palestinian terrorist violence preceding Israeli elections indicate that attacks on nonlocal targets—that is, strikes against fellow Israelis but far from a voter's neighborhood (as Iraq would be for U.S. voters)—tend to boost support for pro-peace candidates.[39]

Al Qaeda would probably supplement this more targeted violence with continued efforts to fashion an increasingly sophisticated media campaign. In his September 7, 2007, video aimed at U.S. viewers, for example, bin Laden made no overt threats, wore a dyed beard to appear more youthful, and criticized the Bush administration (not America) for plunging Iraq into civil war.[40] He also discussed the failure of U.S. Democratic legislators to bring troops back to America, blaming pressure from U.S. business interests. Although bin Laden appears not to understand that as the lead perpetrator of the 9/11 attacks he has no credibility as a statesman-like figure in the United States, he is clearly trying to influence U.S. deliberations on Iraq through more traditional political arguments rather than direct threats.[41]

Further evidence of the possibility of a targeted operational campaign is the growing type of Internet literature called "jihadi strategic studies."[42] This literature includes realistic discussion of short-term Western vulnerabilities, the best example of which was the Web site, visited by the 2004 Madrid train bombers before their operation, that advocated terrorist attacks on European countries to destroy their support for U.S.-led operations in Iraq.[43] The site noted Spain's vulnerability to such operations due to the growing divide between the pro–U.S. Government camp and a population increasingly dissatisfied with the government's support for the war in Iraq. Given the widely accepted notion that the Madrid bombings led directly to the electoral defeat of Spanish President Jose Maria Aznar and the subsequent withdrawal of Spanish troops from Iraq, al Qaeda probably has already incorporated this lesson into its thinking.

religious belief in preordained victory gives al Qaeda operatives mental resilience in the face of setbacks, making it difficult for the West to inflict a decisive psychological defeat

Meanwhile, al Qaeda will continue to try to make its presence felt in other areas to bolster its claim of being a worldwide movement. Its central leadership will seek to further strengthen its base in the loosely governed and geographically rugged Pashtun tribal areas of eastern Afghanistan and northwest Pakistan. Also, al Qaeda is likely to mount new attacks in Europe to further undermine support for U.S. Middle East policies and harness the large and partially disaffected Muslim population in Western Europe. Al Qaeda has pledged to strike Germany, Italy, Denmark, and the Vatican, and Britain's intelligence chief in November 2007 said publicly that he believed the terrorist threat had not "reached its peak."[44] Moreover, U.S. authorities worry that English-speaking al Qaeda operatives living in Europe could take advantage of the visa waiver program and their familiarity with Western ways to eventually strike in the United States once again.[45]

Dead End

Even with more focused operations, al Qaeda will continue to struggle to achieve its goals. Attempts to more precisely target violence for political effect, across a variety of differing political and security environments, using the increasingly loose network of sometimes poorly trained and poorly resourced cells, will be problematic. New operational ideas will not be absorbed or applied equally by all cells, and al Qaeda has not implemented any systematic solutions to its structural weaknesses. Thus, the results are likely to be less decisive than bin Laden and Zawahiri may expect.

To achieve its goals, the United States should consider the following actions, always mindful of the psychological impact of each action on allied, al Qaeda, and wider Muslim audiences:

- kill or capture dedicated al Qaeda members resistant to psychological defeat
- continue to target al Qaeda safe havens, directly or through regional allies, to limit al Qaeda logistics, training, and command and control activities
- continue to disrupt al Qaeda's Internet-based training, command and control, money transfers, and propagandizing designed to aid the creation of new cells
- publicize Western successes against al Qaeda to strengthen impressions of U.S. strength and shrinking al Qaeda capabilities and popularity—thus discouraging fence sitters from joining an organization headed for defeat
- avoid exaggerations and disinformation in U.S. information operations that may undermine American credibility
- describe *intentional* al Qaeda efforts to harm fellow Muslims—killing Iraqi soldiers, assassinating civilians, and blocking humanitarian aid efforts, for example (this is different from showing al Qaeda's disregard for bystanders, which Muslims observing at a distance can rationalize as "collateral damage")
- enable former militants and Muslims harmed by al Qaeda to tell their stories
- choose strategic communications words and themes carefully, with the Muslim

worldview in mind—for example, "new freedoms," "justice," "anticorruption," and "improved economic and educational opportunities" are likely to resonate better than "democracy" and "political pluralism," which may seem like U.S. cultural imports; in addition, the phrase "moderate Muslim" can be understood as "half-hearted Muslim," indicating the need for a more sophisticated term

■ pursue international agreements that hinder terrorist activities—cross-border money transfers, for example—both for their own sake and to show broad international support for the war on terror.

As al Qaeda fails to deliver on its promise of increased pride and power for Muslims, its radical influence is likely to fade much like that of the failed Arab nationalist and other radical movements of the 1960s and 1970s. If these Arab nationalist experiences are a useful analogy, however, the decay of al Qaeda's radicalism may likewise take decades. In the meantime, al Qaeda terrorists may cause great physical damage and human suffering, especially if they acquire weapons of mass destruction. It behooves the West, therefore, to maintain pressure on al Qaeda weaknesses to undermine its military capacity and speed its strategic decline. **JFQ**

NOTES

[1] Christopher Henzel, "The Origins of al Qaeda's Ideology: Implications for US Strategy," *Parameters* 35, no. 1 (Spring 2005), 76.

[2] Norman Cigar, "Al Qaeda's Doctrine for Insurgency: A Translation and Analysis," Marine Corps War College, August 2007, 14.

[3] Allan R. Millett and Williamson Murray, eds., *Military Effectiveness, Volume I: The First World War* (Boston: Unwin Hyman, Inc., 1988), 26–27; and James D. Kiras, *Special Operations and Strategy: From World War II to the War on Terrorism* (New York: Routledge, 2006), xii.

[4] This goal is not stated explicitly in any al Qaeda document or public statement, but it can be inferred from study of the group's multiple statements of goals.

[5] See discussion of Allah's preordained victory in Cigar, 14.

[6] Ayman al-Zawahiri, *Knights under the Prophet's Banner*. Serialized in London-based daily *Al-Sharq al-Awsat*, December 2001. Trans. Foreign Broadcast Information Service, 2002 (BIS–NES–2002–0108), 95.

[7] Alan Cullison, "Inside Al-Qaeda's Hard Drive," *The Atlantic* Online, September 2004, 15, available at <http://www.theatlantic.com/doc/200409/cullison>.

[8] Abu Bakr Naji, *The Management of Savagery*, trans. William F. McCants (Cambridge: John M. Olin Institute of Strategic Studies, Harvard University, May 23, 2006), 1, 9.

[9] Chris E. Stout, ed., *Psychology of Terrorism* (Westport, CT: Praeger, 2004), 49.

[10] Zawahiri, 47, 102.

[11] Cullison, 15.

[12] Naji, 8.

[13] Zawahiri, 100–101.

[14] Naji, 8.

[15] See discussion of Muqrin's economic targeting ideas in Cigar, 31.

[16] Naji, 9.

[17] Mahan Abedin, "The Essence of Al Qaeda: An Interview with Saad Al-Faqih," *Spotlight on Terror* 2, no. 2 (February 5, 2005), available at <www.jamestown.org/terrorism/news/article.php?issue_id=2907>.

[18] Naji, 8.

[19] Ibid., 11–12.

[20] Ibid., 4.

[21] Zawahiri, 98–99.

[22] Shmuel Bar and Yair Minzili, "The Zawahiri Letter and the Strategy of al-Qaeda," *Current Trends in Islamist Ideology*, vol. 3 (February 16, 2006), available at <www.futureofmuslimworld.com/research/pubID.40/pub_detail.asp>.

[23] Lydia Khalil, "The Islamic State of Iraq Launches Plan of Nobility," *Terrorism Focus* 4, no. 7 (March 27, 2007), 1–2.

[24] Cigar, 19.

[25] Naji, 69.

[26] Jarret M. Brachman and William F. McCants, "Stealing Al-Qaeda's Playbook," Combating Terrorism Center at West Point, February 2006, 16.

[27] Christopher M. Blanchard, *Al Qaeda: Statements and Evolving Ideology*, Congressional Research Service Report RL32759, July 2007, 6; Zawahiri, 50.

[28] Zawahiri, 14; Bruce Hoffman, *Inside Terrorism* (New York: Columbia University Press, 1998), 170–171.

[29] Bill Roggio, "Al Qaeda in Iraq Executes Bombing Offensive," *The Long War Journal*, December 8, 2007, available at <www.longwarjournal.org/archives/2007/12/al_qaeda_in_iraq_exe.php>.

[30] Michael Scheuer, "Al-Qaeda Doctrine: Training the Individual Warrior," *Terrorism Focus* 3, no. 12 (March 28, 2006), available at <www.jamestown.org/terrorism/news/article.php?articleid=2369944>.

[31] Cigar, 25.

[32] Henzel, 77.

[33] Brian Jackson et al., *Aptitude for Destruction, Volume 2: Case Studies of Organizational Learning in Five Terrorist Groups* (Santa Monica, CA: RAND, 2005), 44–53; Daniel Byman, *Understanding Proto-Insurgencies* (Santa Monica, CA: RAND, 2007), appendix A.

[34] Brachman and McCants, 9; Blanchard, 12; Naji, 4.

[35] Cigar, 41–47.

[36] Greg Miller, "Iraq a 'big moneymaker' for al-Qaeda, says CIA," *The Los Angeles Times*, May 20, 2007.

[37] Ibid.

[38] Jeremy M. Weinstein, *Inside Rebellion: The Politics of Insurgent Violence* (New York: Cambridge University Press, 2007), 9–10, 42–43.

[39] Dennis Foster, Alex Braithwaite, and David Sobek, "Terrorist Violence and Israeli National Elections," conference paper presented to the International Studies Association, Honolulu, Hawaii, March 5, 2005; Claude Berrebi and Esteban Klor, "Are Voters Sensitive to Terrorism? Direct Evidence from the Israeli Elections," October 2007, available at <http://papers.ssrn.com/sol3/papers.cfm?abstract_id=963965>.

[40] Mary Louise Kelley and Melissa Block, "Bin Ladin Offers No New Threat in Latest Video," National Public Radio, October 30, 2007, available at <www.npr.org/templates/story/story.php?storyId=14239653 >.

[41] Ibid.

[42] Brynjar Lia and Thomas Hegghammer, "Jihadi Strategic Studies: The Alleged Al Qaeda Policy Study Preceding the Madrid Bombings," *Studies in Conflict and Terrorism* 27, no. 5 (September-October 2004), 355–375.

[43] Ibid.; Cigar, 12.

[44] Robert S. Leiken and Steven Brooke, "Al Qaeda's Second Front: Europe," *International Herald Tribune*, July 15, 2005; Sarah Lyall, "British Intelligence Chief Sharpens Terrorism Warning," *The New York Times*, November 6, 2007.

[45] Michael Jacobson, *The Changing and Expanding al-Qaeda Threat*, Policy Watch #1263 (Washington, DC: The Washington Institute, July 25, 2007), available at <www.washingtoninstitute.org/templateC05.php?CID=2639>.

B–2 Spirit delivers Joint Direct Attack Munitions

U.S. Air Force

Defeating Global Networks

The Need for a Strategic Targeting Organization

By ROBERT M. BRASSAW

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Adversaries threaten the United States throughout a complex battlespace . . . spanning the global commons. . . . Within these areas rogue states provide sanctuary to terrorists, protecting them from surveillance and attack. Other adversaries take advantage of ungoverned space and under-governed territories from which they prepare plans, train forces and launch attacks. These ungoverned areas often coincide with locations of illicit activities: such coincidence creates opportunities for hostile coalitions of criminal elements and ideological extremists.

—*The National Military Strategy of the United States of America*, 2004

The National Military Strategy clearly articulates the diverse global threats that face the United States, but the Department of Defense (DOD) has not implemented a process to deal with these adversaries effectively. Current threats involving transnational and nonstate actors operate across the areas of responsibility (AOR) of multiple combatant commands. In order to deal with these threats, there must be a single DOD entity empowered to globally integrate and prioritize targeting.

Combatant commanders are assigned a wide range of missions, such as conducting Global Strike, waging the war on terror, supporting counternarcotics operations, and countering weapons proliferation. In some of these mission areas, the combatant commander's geographic boundaries are insufficient to

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delineate where one commander's responsibilities end and another's begin. Therefore, it is imperative that DOD adapts to cover the seams created where global networks form that can threaten U.S. interests. Current doctrine is insufficient to address these complex networks, which link adversary states, terrorists, narcotics dealers, international criminal organizations, financiers, weapons proliferators, and individual nonstate actors.

Although the Armed Forces have the capability to find, fix, and track many of these threats, DOD frequently lacks the *legal* authorities to target and engage them. Often the threats exist in sovereign nations outside of designated combat zones and are *criminal* as opposed to *military* in nature. An interagency process must be an integral part of resolving this targeting issue, but DOD first needs to establish a body to function as the global targeting synchronizer within itself.

Establishing a global strategic targeting organization within DOD to address transnational threats is critical. A history of how and why the current doctrine and structure have evolved is vital to understanding the deficiencies of the military's current organization. It is important to recognize that future targeting organizations must be created with the necessary authorities to carry out missions across the globe, unrestricted by geographic boundaries. By implementing a global strategic targeting system, based on joint targeting doctrine, DOD would better synchronize targeting among the unified commands and streamline the decision loop.

Background

Joint targeting doctrine was created for operational level commands and their subordinate components to plan, coordinate, and execute targeting successfully.[1] Regardless of the level for which the doctrine was written, targeting fundamentals are applicable at all levels of command from an infantry squad up to the National Security Council. Additionally, it is crucial to disassociate the idea of targeting from its air-centric roots founded in second- and third-generation warfare. Targeting at the global-strategic level must be viewed from a fourth-generation warfare perspective where objectives are rarely achieved by putting bombs on target.[2]

To begin, what constitutes a *target* and *targeting*? Joint doctrine provides the following definitions:

> *A target is an entity or object considered for possible engagement or action. It may be an area, complex, installation, force, equipment, capability, function, individual, group, system, entity, or behavior identified for possible action to support the commander's objectives, guidance, and intent. . . . Targeting is the process of selecting and prioritizing targets and matching the appropriate response to them, considering operational requirements and capabilities.*[3]

Moreover, targeting helps a commander synchronize operations and supports the process of assigning targets to a subordinate commander for engagement or action.

Targeting is a commander's responsibility. Combatant commanders and joint force commanders (JFCs) normally assign targeting responsibilities to a Joint Targeting and Coordination Board (JTCB), whose primary participants are operations, plans, and intelligence personnel from the JFC staff and representatives from all components and functional commands, supporting commands, and supporting agencies. The JFC normally appoints the deputy JFC or a component commander to chair the JTCB. The JTCB integrates and synchronizes target planning, execution, and assessment. It also validates all target nominations and provides the commander a joint integrated prioritized target list for approval.[4]

targeting at the global-strategic level must be viewed from a fourth-generation warfare perspective where objectives are rarely achieved by putting bombs on target

The JTCB maintains the joint target list, which is a consolidated list of all targets upon which no restrictions are placed; the no-strike list, showing targets for which no targeting authorities exist and are protected under international law and/or rules of engagement; and the restricted target list, showing targets upon which certain targeting restrictions apply. By coordinating these functions and maintaining these lists, the JTCB assures proper deconfliction, prioritizes allocation of resources, identifies shortfalls, and applies appropriate restraints to the targeting system. This provides centralized command and facilitates decentralized execution while preventing duplicative efforts.[5]

Targets should be developed from the lowest levels of the chain of command based on their assigned objectives. Subordinate commanders must be able to nominate targets in their AOR, which they do not have the resources or authority to prosecute. To prevent fratricide and unintended consequences, one final tenet is required: in order to engage targets in another command's AOR, actions must be coordinated through the command that owns the area.[6]

In one way or another, albeit less formally, joint targeting has taken place in every war that the United States has fought. It was first addressed at the DOD level during the 1950s to synchronize all the Services' strategic nuclear capabilities into one integrated operational plan. From 1954 until the Secretary of Defense establishment of a Joint Strategic Target Planning Staff (JSTPS) in 1960, attempts to resolve targeting conflicts and achieve mutual support or unity of strategic effort between the Service chiefs and operational commanders were unsuccessful. The Secretary of Defense at the time considered forming the JSTPS as the most important decision of his tenure.[7]

According to Strategic Air Command history, "In 1954, the [Joint Chiefs of Staff] asked each appropriate commander to submit . . . a target list to his war plan and to coordinate it with theater commanders and CINCSAC [commander in chief, Strategic Air Command]."[8] This was not effective and led to annual World Wide Coordination Conferences, which also failed to solve targeting conflicts. These conferences in 1957 and 1958 revealed that duplication and triplication had not been significantly reduced. Although the Joint Chiefs could not agree on a policy, there was consensus that a targeting policy and a national target list were needed.[9]

Ultimately, in keeping with current doctrine, the Secretary of Defense decided to create a Joint Strategic Target Planning Staff (a *strategic* Joint Targeting and Coordination Board) to solve this issue. He then designated the commander in chief of Strategic Air Command (a component commander) as director. The biggest debate among the Services appears to have centered on where the staff should reside; not wanting to cede control to a single commander, the Navy and Marines favored leaving responsibility with the Joint Chiefs of Staff.[10]

The Services pursued their own targeting and fire support coordination initiatives until

1986, when Congress passed the Goldwater-Nichols Department of Defense Reorganization Act, which imposed joint operations on the Armed Forces and empowered the combatant commanders. Ironically, the first authoritative joint targeting publication was not released until after the events of September 11, 2001.[11] Fortunately, the publication was grounded in experience from real world operations and not "merely" theory. Operations in the first Gulf War and Balkans served as the test bed for joint targeting and provided solutions to the contentious issues among the Services.

The first Gulf War provided several targeting lessons, both good and bad. First, it demonstrated that modern communications offered a means to centralize targeting despite the separation of forces. Reachback, the ability for a deployed unit to leverage network technology to access all-source intelligence supplied by nondeployed units, obviates the need to centralize collection and analysis sources.[12] Technology and experiences since 9/11 have improved significantly on this capability.

Second, execution of the Gulf War air campaign raised animosity among the Services when the JFC delegated responsibility for targeting to a joint force air component commander (JFACC) who disregarded targets submitted by the other component commanders. In this instance, the JFC delegated responsibility of a command function to a component commander who proved to be less than impartial. Ultimately, the Army and Marine component commanders argued that the JFACC was not shifting priority to Iraqi forces in Kuwait as the ground war approached. This friction between component commanders forced the JFC to appoint his deputy as the JTCB lead.[13]

Third, the Gulf War showed the necessity to translate objectives and commander's guidance into a complementary targeting strategy that accounted for second- and third-order effects. Despite guidance from the President to minimize casualties among Iraqi noncombatants and to prevent excessive damage in order to accelerate postwar recovery, the JFACC targeted oil refineries and electrical power systems at the expense of this guidance. Although effective militarily, this method disrupted water purification and sewage treatment plants, causing major health problems for the civilian population.[14]

Lastly, difficulty attaining all-source intelligence during the Gulf War demonstrated a need for access to coordinated interagency target intelligence. As a result, the Joint Staff Intelligence Directorate (JS–J2) established a National Military Joint Intelligence Center (NMJIC) to support the combatant commander's Intelligence Directorate (J2) in attaining national-level targeting intelligence from the Central Intelligence Agency, Defense Intelligence Agency, and National Security Agency. The NMJIC proved effective at providing all-source targeting intelligence and was able to leverage modern communications to share it with the JFACC. Although valuable, this initiative caused friction and disrupted operations when the NMJIC and JFACC bypassed the combatant commander's J2.[15]

Based on lessons learned from the first Gulf War, Operation Southern Watch, and the Somalia crisis, the JS–J2 formed a permanent targeting intelligence support section in August 1993. Its responsibilities expanded further after a 1994 Defense Intelligence Agency study that also resulted in aligning the Joint Warfare Analysis Center and Joint Electronic Warfare Center to support national-level targeting. In addition to coordinating targeting and combat assessment for combatant commanders, the target intelligence support section supported Theater Missile Defense (TMD) targeting of mobile missile systems, special programs for the Joint Staff Operations Directorate (J3), and Special Technical Operations (STO).[16]

From an intelligence perspective, these adjustments made a significant impact in subsequent crises in Iraq, Somalia, Bosnia, Haiti, and North Korea.[17] But as identified in *Air & Space Power Journal* prior to 9/11, the "establishment of JS–J2 Directorate of Targets and the intelligence community's realignment . . . are only a 'band-aid fix' to a deeper problem—a void in the operations-intelligence interface."[18] The authors proposed building on the Joint Strategic Target Planning Staff model discussed earlier to develop a national-level joint targeting organization.

The principle of centralized command and decentralized execution is essential to accelerate the decision cycle especially when conducting dynamic targeting.[19] Since the first Gulf War, technological advances have vastly shortened the kill chain, the time between identifying a target and then engaging it. Subsequent conflicts, namely Operations Allied Force in the Federal Republic of Yugoslavia and Enduring Freedom in Afghanistan, demonstrate that leaders with access to real-time targeting information take more time to decide; it was the only step in the kill chain to expand. Strategic and operational leaders have not sufficiently delegated authority to their subordinates, resulting in slower execution and decreased efficiency. For example, during Operation Allied Force, President Bill Clinton and North Atlantic Treaty Organization (NATO) strategic political and military leaders controlled the aerial bombing campaign. This interference hamstrung the air component commander's targeting efforts, creating frustration at the operational-tactical level and lengthening the decision loop.[20]

Difficulties of Global Targeting

Since 9/11, DOD has attempted to synchronize global operations by designating a combatant commander as the global synchronizer for certain mission sets. U.S. Special Operations Command (USSOCOM) is the global synchronizer for operations

OH–58 fires rocket on test target before entering Mosul to provide security for ground troops

115th Mobile Public Affairs Detachment (John Crosby)

against terrorist networks, and U.S. Strategic Command (USSTRATCOM) is the DOD synchronizer for combating weapons of mass destruction (WMD). At first glance, assigning these tasks to a capable combatant commander appears logical. Both USSOCOM and USSTRATCOM have the expertise and capability to provide global command and control of forces conducting those missions.

A problem arises, however, when one takes into account the regional combatant commanders who have authority and responsibility for all operations within their respective AORs. Those responsibilities are clearly defined in the Unified Command Plan. Similar to the situation normally encountered by a JFACC, neither USSOCOM nor USSTRATCOM owns the battlespace where their intended target is to be engaged. Adding to the problem, the term *synchronizer* is not a clearly defined or recognized command relationship.[21] Ultimately, the idea of placing a functional combatant commander as a "global synchronizer" leads to friction and defeats the intent. It certainly is not as clear as operational control (OPCON) or supported/supporting command relationships.

Putting aside the above complications, even if the global synchronizer relationship worked perfectly, there would still be gaps created by overlap in combatant commander responsibilities. Clearly, denying terrorists WMD is of primary concern; the possibility of Saddam Hussein's supplying WMD to terrorists was one of the justifications for the war in Iraq. Under this premise, USSOCOM and USSTRATCOM have shared interests and have probably identified some of the same targets.

Who is responsible for synchronizing and prioritizing these separate target lists? This is not clear. Each command has a JTCB of some form, but there is not a higher-level command JTCB to synchronize both target lists and set priorities for intelligence collection. This problem is compounded when the regional combatant commanders' missions are added into the mix.

USSTRATCOM could divert targeting resources away from a supported combatant commander to conduct its own missions, even if U.S. Strategic Command is attempting to act impartially. Due to the missions and forces assigned to it, USSTRATCOM is the de facto prioritization authority for numerous national targeting resources. In addition to its role as DOD synchronizer for combating WMD, it controls national-level resources for intelligence, surveillance, and reconnaissance; network warfare; and information operations. USSTRATCOM's implied authority for apportioning these assets could upset a regional combatant commander. This friction would mirror how Army and Marine commanders felt about the JFACC during the first Gulf War. Arguably, DOD did not intend to put USSTRATCOM in this position of authority.

However, USCENTCOM does have OPCON of forces supporting the United Kingdom–led counternarcotic operations in Afghanistan, not SACEUR. Recently, the *Afghanistan Opium Survey 2007* reported that the Taliban is funding operations with opium and that a major responsibility lies with the opiate consuming countries, namely the European Union (EU) members and China.[23] USCENTCOM has a keen interest in targeting narcotics networks operating in China and the EU, but both are outside its AOR. The supported commander for targeting these Taliban narcotics networks is not clear. It is not in USSOCOM's purview because the U.S. Government has not declared the Taliban as a terrorist organization, and USCENTCOM is neither designated as the global synchronizer for counternarcotics nor does it have authority to capture Taliban outside the designated combat zone.

operations in the first Gulf War and Balkans served as the test bed for joint targeting and provided solutions to the contentious issues among the Services

Another major area of concern is cross-boundary operations. In a 2000 *Joint Force Quarterly* article, Richard Lechowich from U.S. Central Command's Directorate of Plans and Policy captured the challenges combatant commanders are presented with:

> *Drugs originating in the CENTCOM [U.S. Central Command] area of responsibility could be detected by SPACECOM* [U.S. Space Command]*, survive crop eradication, and be tracked across the AOR in transit to EUCOM* [U.S. European Command] *for transshipment. EUCOM would then monitor the movement while alerting friendly law enforcement agencies. Finally, either SOUTHCOM* [U.S. Southern Command] *or U.S. Joint Forces Command could help domestic law enforcement agencies interdict the shipment and arrest the perpetrators. . . . Crossing the invisible boundaries that separate CINC* [commander in chief] *responsibilities is perhaps even more difficult today than when Clausewitz first formalized the concept of friction. Such battlefield seams as cross-boundary situations are a weak point for enemy exploitation. Commanders on all levels will still have to spend additional effort to ensure that these seams are covered.*[22]

Cross-boundary and interagency operations in a post-9/11 world are just as complicated. An excellent example is Afghanistan, which falls in USCENTCOM's AOR, but NATO forces conducting stability and reconstruction operations in support of the United Nations Assistance Mission there are under the OPCON of the Supreme Allied Commander Europe (SACEUR), who *also* happens to be double-hatted as commander of U.S. European Command. NATO forces are not under the operational control of USCENTCOM, but they do operate in its AOR.

The issues highlighted here provide some of the many reasons why a DOD-level entity is needed to integrate and prioritize targeting globally. The experience gained developing the Joint Strategic Target Planning Staff in the 1950s and lessons learned fighting wars since the Goldwater-Nichols Act was enacted should be combined to better conduct targeting in the post-9/11 world. The nature of the Nation's adversaries requires DOD to face reality and make adjustments.

Regardless of the name of this new organization, it should combine the intelligence and operations targeting functions performed by a JTCB. For simplicity, this organization should be referred to as the Strategic JTCB (S–JTCB). In addition to traditional kinetic targeting, the S–JTCB needs to leverage all instruments of national power to include information operations, network warfare, strategic communications, law enforcement, financial warfare, and special access programs. Because transnational threats blur the line between combatant and criminal, close coordination with the Staff Judge Advocate is necessary to ensure legal boundaries are not violated and proper authorities exist. If legal authorities exist in other government agencies, the S–JTCB should have unfettered access to those agencies. If no authorities exist, this organization should have access to appropriate principles that may grant them.

Recommendations

Three arrangements stand out as possible solutions to the problem. First, because of its experience dealing with strategic targeting, current assigned missions, and resources at its disposal, the Secretary of Defense could designate USSTRATCOM to host and chair the S–JTCB. This would most closely mirror the JSTPS endorsed in 1960 and still align with doctrine. USSTRATCOM's geographic location makes it difficult to create and maintain day-to-day contacts with decisionmakers from other government agencies. As expressed earlier and in keeping with the dissenting opinions of the Navy and the Marines in the 1950s, delegating this responsibility to peer combatant commanders could lead to friction between commands.

Second, the most obvious possibility would be to place the S–JTCB within the Joint Staff, which would elevate the board above the combatant commanders. Doing so would silence any claims of impartiality. As intelligence targeting functions are already being carried out by the JS–J2, placing the S–JTCB in the Joint Staff would only require tying the JS–J3 into the process. Being located within the Beltway would allow it to create and maintain close contact with decisionmakers and afford interagency representatives the opportunity to attend the S–JTCB. This would significantly shorten the decision loop by placing it closer (in both time and location) to Federal decisionmakers who have or can attain targeting authorities. In this arrangement, the S–JTCB could be chaired by the Vice Chairman of the Joint Chiefs of Staff or perhaps the Director of the Joint Staff.

One major problem with this arrangement is that by law, the Joint Staff has no executive authority over combat forces.[24] However, a third option exists: the S–JTCB could be placed within the Office of the Secretary of Defense (OSD) and chaired by an Assistant Secretary of Defense. This would generate the same benefits described above and would shorten the decision loop even more. The JS–J2/J3 would form the backbone of the Joint Targeting Working Group, which could consolidate input from the combatant commanders and perform the administrative legwork. This arrangement would ensure that the Chairman of the Joint Chiefs of Staff maintained oversight in his role as senior military advisor to the Secretary of Defense and President. OSD also has access and tasking authority of unique capabilities resident in special access programs that could be leveraged for targeting purposes. An added benefit to this option is that OSD could form a cadre of permanently assigned civilian targeting professionals who could maintain corporate knowledge and develop long-lasting ties with other government agencies that would span Presidential administrations and tenures of military leaders.[25]

For a strategic targeting process to work and not just create another unnecessary layer of bureaucracy, several initial conditions must be met. Foremost, strategic leaders must understand and conform to the principle of centralized command–decentralized execution. Targeting planners must move past the "warheads on foreheads" mentality and understand how to incorporate all instruments of national power. To accomplish this, a Strategic Joint Targeting and Coordination Board must include representatives from all Federal agencies. Finally, to produce synchronized target lists, the combatant commands need to adopt a common targeting database.

The Department of Defense would see many benefits if a Strategic Joint Targeting and Coordination Board were established. Strategic targeting would be better matched to government objectives, and high-demand/low-density national-level targeting resources would be better managed. There would be improved synchronization and deconfliction of operations among combatant commanders. Combatant command access to all-source intelligence and resources of other government agencies would be enhanced, ultimately leading to an accelerated decision loop and authorities approval process. **JFQ**

NOTES

[1] Joint Publication (JP) 3–60, *Joint Targeting* (Washington, DC: Department of Defense, April 13, 2007), i.

[2] William S. Lind et al., "The Changing Face of War: Into the Fourth Generation," *Marine Corps Gazette*, October 1989, 22–26. *Fourth-generation warfare* encompasses dispersed entities that blur the line between war and peace. Boundaries are often undefined, and effectiveness is dependent on interagency unity of effort as lines between responsibility and mission cross.

[3] JP 3–60, vii, I–1.

[4] Ibid., x.

[5] Ibid., II–8, II–9.

[6] JP 3–09, *Joint Fire Support* (Washington, DC: Department of Defense, November 13, 2006), viii.

[7] U.S. Strategic Air Command, "History of the Joint Strategic Target Planning Staff: Background and Preparation of SIOP–62," (Offutt Air Force Base, NE: History and Research Division Headquarters Strategic Air Command, declassified 1980), 1, available at <www.dod.mil/pubs/foi/reading_room/16.pdf>.

[8] Ibid., 3.

[9] Ibid., 4, 10.

[10] Ibid., 6.

[11] Thomas J. Murphy and Bernd L. Ingram, "Joint Targeting Doctrine," *Field Artillery* (September-October 2001), 36–38. JP 3–60 was first released in January 2002. In July 1997, however, the Air Land Sea Application Center released Field Manual 90–36, *The Joint Targeting Process and Procedures for Targeting Time-Critical Targets*, which served as the foundation for JP 3–60.

[12] Edward B. Schmidt, "Targeting Organizations: Centralized or Decentralized?" (Maxwell Air Force Base, AL: School of Advanced Airpower Studies, Air University, 1993), 54–55.

[13] Eliot A. Cohen et al., *Gulf War Air Power Survey*, Summary (Washington, DC: U.S. Government Printing Office, 1993), 154–155.

[14] Matt McKeon, "Joint Targeting: What's Still Broke?" (Maxwell Air Force Base, AL: School of Advanced Airpower Studies, Air University, 1999), 29.

[15] Mark C. Christian and James E. Dillard, "Why We Need a National Joint Targeting Center," *Air & Space Power Journal*, January 6, 2000, 3, available at <www.airpower.maxwell.af.mil /airchronicles/cc/Dillard.html>.

[16] Ibid., 5.

[17] Ibid., 6.

[18] Ibid.

[19] Dynamic targeting prosecutes targets of opportunity and changes to planned targets or objectives. Dynamic targeting steps consist of find, fix, track, target, engage, and access. It is commonly referred to as the *kill chain*.

[20] Richard M. Gomez, "Centralized Command–Decentralized Execution: Implications of Operating in a Network Centric Warfare Environment" (Maxwell Air Force Base, AL: Air War College, 2004), 11–12.

[21] See JP 3–0, *Joint Operations* (Washington, DC: Department of Defense, September 17, 2006), for recognized command relationships.

[22] Richard A. Lechowich, "Cross Boundaries: Commanders in Chiefs and Areas of Interest," *Joint Force Quarterly* 24 (Spring 2000), 37–38, available at <www.ndu.edu/inss/Press/jfq_pages/0924.pdf>.

[23] United Nations Office on Drugs and Crime, *Afghanistan Opium Survey 2007*, Executive Summary, v–vii, available at <www.unodc.org/pdf/research/AFG07_ExSum_web.pdf>.

[24] Since its establishment in 1947, statute has prohibited the Joint Staff from operating or organizing as an overall armed forces general staff; therefore, the Joint Staff has no executive authority over combatant forces.

[25] Schmidt, 55.

Command and Control of **Military Forces in the Homeland**

By **JEFFREY W. BURKETT**

To serve in the National Guard is to accept a dual mission. You can be called on to defend the country against enemies abroad, or to protect lives and property here at home in times of local emergency.[1]

—Richard B. Cheney

The U.S. military and state National Guard have a long and proud tradition of defending our nation from attack and assisting civil authority during times of crisis. Notwithstanding their primary Federal purpose of fighting wars, the frequency with which U.S. military forces are employed for missions related to homeland security has risen dramatically since 9/11. This change is understandable given the increase in the perceived and actual threat to the United States. The American military, which is one of the largest Federal investments, is arguably the most versatile organization in terms of capability and responsiveness. Fiscal appropriations by Congress for its organizational structure, composition, and equipment are intended to satisfy the current National Military Strategy.

In an effort to streamline military roles and responsibilities for homeland defense[2] and civil support, several notable changes have taken place since 9/11. First, Presidential authority established U.S. Northern Command (USNORTHCOM) in 2002. Second, the National Guard reorganized itself at the state level and launched a series of homeland defense and security programs. Likewise, the National Guard Bureau (NGB) also transformed itself by improving its national coordinating ability and refining its supporting role for state governments and the national defense community. Finally, Congress changed the Federal law (Title 32) that governs the National Guard to create the legal framework for the executive branch to employ the Guard in homeland defense and civil support actions.

National Guard Bureau chief is briefed on wildfire locations during operations in California

U.S. Air Force (David J. Loeffler)

Despite these and other initiatives, improvements to the ability to employ Federal military capacity in support of civil authorities are contentious, in part, because of a lack of state and Federal strategic cooperation over command and control (C^2) authority. As a result, a political and operational rift has emerged in the state-Federal support relationship, creating the potential for a less than optimal response when the Department of Defense (DOD) provides support.

The lack of unity of effort between the National Guard and Federal military forces must be resolved. Natural disasters such as hurricanes, tornados, floods, and earthquakes repeatedly demonstrate that catastrophes can strike unexpectedly and may quickly overwhelm the ability of local, county, tribal, and state governments to respond. Incidents contained in national planning scenarios such as chemical, biological, radiological, nuclear, and high-yield explosive (CBRNE) events are also possible and may be even more overwhelming. It would be a tragedy if any state had difficulty in teaming with the Federal military if any of these scenarios occurred. This article examines the command and control of military forces in support of civil authority and recommends that the Title 32 dual-status command arrangement be mandated and institutionalized for all domestic military civil support responses, including no-notice catastrophes.

Background

Recognizing the convergence and growing scope of state and Federal military

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domestic missions following 9/11, Congress amended Title 32 in the 2004 National Defense Authorization Act, permitting National Guard commanders to retain their state commissions after being ordered to Active duty. This change allows a National Guard officer to command both Federal and state forces simultaneously (dual-status) to preserve unity of command at the operational level. Within months of this legislative change, dual-status command arrangements were implemented in three national special security events and in support of the U.S. Customs and Border Protection's border patrol during Operation *Winter Freeze*. These operations were coordinated extensively among USNORTHCOM, NGB, and the National Guard and were viewed as successful examples of state and Federal military cooperation.

Building on this momentum, in 2005 Congress again amended Title 32, authorizing the Secretary of Defense to "provide funds to a Governor to employ National Guard units or members to conduct homeland defense activities."[3] With these laws in place, the opportunity to federally fund and decentrally leverage the National Guard under state authority for domestic operations was established. Together, these two amendments to Title 32 establish the framework for integrating state and Federal military efforts while preserving the principles of federalism. These actions also support the concept of an active, layered defense contained in the National Defense Strategy and reinforce DOD's homeland defense and civil support vision, which recognizes that "the National Guard is particularly well suited for civil support missions."[4]

Unfortunately, Federal military support of civil authorities since 9/11 is proving to be more complicated than anticipated. Regardless of how effective USNORTHCOM is in providing support to civil authorities, it is wasted effort if this support does not advance state and Federal civil support goals simultaneously. The national consternation caused by the uncoordinated National Guard and Federal military response in the aftermath of Hurricane Katrina makes this point clear. The White House, Congress, multiple think tanks, and the public observed dysfunctional relationships and lack of unity of command and effort by Federal and state forces. To be sure, the military performed superbly at the tactical level, but according to the Executive Office of the President, at the strategic and operational level, "lack of an integrated command structure for both active duty and National Guard forces exacerbated communications and coordination issues during the initial response."[5]

Louisiana Governor Kathleen Blanco's opposition to federalizing the state National Guard and her rejection of President Bush's offer to appoint an Active-duty officer instead of using a state National Guard officer as a dual-status commander highlight the clash between top-down (Federal) and bottom-up (state) philosophies. Some experts have argued that Hurricane Katrina is a political anomaly and should not be used for comparison. Nevertheless, Hurricane Katrina and the flooding of New Orleans constituted the first missed opportunity for USNORTHCOM and the National Guard to demonstrate the utility of a National Guard dual-status command for a no-notice event.

Regrettably, Hurricane Katrina is not the only example of a counterproductive struggle over the issue of C^2 authority. Other notable incidents reflecting confusion over C^2 authority include Hurricanes Rita and Wilma in 2005. These civil support actions illustrate how a subtle but significant degradation has occurred in the Federal-state relationship with respect to military support of civil authorities.

Polarizing Domestic Military Assistance

After witnessing complications in the aftermath of Hurricane Katrina, Governor Rick Perry of Texas was determined to lead the Hurricane Rita response by retaining command and control over the Texas National Guard. In response to a White House request to establish an Active-duty officer as a dual-status commander, Governor Perry requested Presidential authorization for a Texas National Guard officer to be approved as a dual-status commander.[6] Hurricane Rita did not have the impact on Texas that Katrina had on Louisiana, and significant Federal military support was not required. Nevertheless, Governor Perry's request went unfulfilled, and unity of command under a dual-status arrangement never happened. Federal forces operating in Texas answered to the Federal chain of command that ran back to USNORTHCOM versus integrating with the state military response directly.

The stalemate over C^2 left the impression with Governors and Guard members that National Guard dual-status commanders are not trusted to lead both state and Federal forces for a disaster response. By October 2005, Hurricane Wilma threatened Florida and created the perfect storm for a state and Federal showdown. Determined to be in place and ready to respond to any Federal Emergency Management Agency mission assignment, USNORTHCOM alerted the Fifth Army, under the command of Lieutenant General Robert Clark, and began planning to establish a joint task force (JTF) in Florida. USNORTHCOM never proposed a dual-status command arrangement. On discovering the pending deployment of Federal forces, Governor Jeb Bush of Florida called the Secretary of Homeland Security, Michael Chertoff, and complained that the Federal Government's unilateral actions were insulting to him personally and to the citizens of Florida.[7]

Two significant themes emerge from these events. First is the reluctance of a state to give up its sovereignty and authority during a crisis. Second is the state's desire to have its own National Guard commander in charge of *all* forces that are in support of a state response. More importantly, these cases illustrate a trend in the state-Federal relationship and offer evidence that Federal assistance can be viewed as a complicating factor rather than a solution even in a crisis. Where Federal military forces are concerned, it reflects an unacknowledged tension in USNORTHCOM's inability to integrate with the National Guard and seamlessly support state requirements during a contingency.

The strategic damage from a polarized Federal-state relationship cannot be overstated. Debating over command and control during a crisis wastes precious time and could result in future state rejection of Federal assistance. Moreover, current DOD policies that block operational integration of Federal military resources are counterproductive. In 2003, congressional foresight codified National Guard dual-status commands as essential to bridge the Constitution's division of responsibilities between the Federal and state governments. Dual-status command preserves Presidential and gubernatorial authority and leverages

following 9/11, Congress amended Title 32, permitting National Guard commanders to retain their state commissions after being ordered to Active duty

the tremendous U.S. military capability for response in the homeland. Therefore, the question of why dual-status commands have not been wholeheartedly embraced for domestic military response after four successful experiences in 2004 must be examined.

C² in the Homeland

Domestic emergency management doctrine is based on a tiered framework that originates at the local level and is progressively supported by additional response capability when needed. Since most emergencies are limited in scope and scale, this policy is generally successful. The benefits include rapid, efficient, and cost-effective responses meeting the needs of the American public for most situations. The bottom-up approach also encourages community resiliency and self-sufficiency at the local level. Regardless of the scale and scope of a disaster, four C² options are available to our military and civilian leadership.

Governor Jeb Bush complained that the Federal Government's unilateral actions were insulting to him personally and to the citizens of Florida

State Command. The first option is state command and consists purely of National Guard forces ordered to duty by a Governor. Every aspect of such National Guard employment is in accordance with state law and funded by the state. Several hundred Guardsmen around the Nation are in state Active-duty status every day performing state missions such as search and rescue, incident response, and critical infrastructure protection. These missions also provide a domestic deterrent against potential attackers and indirectly support the Nation's homeland defense and homeland security missions.[8] The other status that falls under state command is Title 32, by which Guardsmen perform duties to accomplish training for their Federal mission or execute operational missions approved by the Federal Government, such as counterdrug or homeland defense activities.

The use of state command employs a Joint Force Headquarters–State (JFHQ-State) providing command and control for all in-state National Guard forces. The JFHQ-State can also act as a joint Service headquarters for national-level response efforts during contingency operations.[9] In this role, the JFHQ-State will generate a tailored JTF to assume tactical control of National Guard units supporting emergency response requirements. For operations that demand a large response force or multiple unique military capabilities, subordinate JTFs may be generated. The C² diagram in figure 1 illustrates the simplicity of state-only coordination with multiple JTFs.

In the event that a specific military capability is not available in a state, assets may be requested from other states through mutual aid agreements, the Emergency Management Assistance Compact (EMAC), other emergency assistance compacts, or the Stafford Act. The utility of states sharing National Guard capability as well as other resources was demonstrated during Hurricane Katrina. Moreover, several initiatives since 2005 have refined the EMAC coordination process, and today it is considerably more efficient.

Communication and coordination are provided in every JFHQ-State with an around-the-clock joint operations center, which provides situational awareness and a common operating picture to state and Federal stakeholders. Not only are all state joint operations centers capable of classified and unclassified operations, but they are also tightly integrated with state emergency operations centers and staffed with experienced personnel.

The primary advantages of the state command option include the preservation of state sovereignty over the response effort, detailed local area knowledge, clear lines of command, unity of effort, unity of command, avoidance of Posse Comitatus restrictions, and fast response times. With a state-only Guard response, Governors retain their constitutional authority and control. Additionally, this option maximizes familiarity with local conditions, resources, personalities, and organizations.

Because Governors' constitutional responsibilities span a range of issues from enforcement of civil order to protection of critical infrastructure, the National Guard is a powerful capability in supporting a Governor's ability to discharge the duties of office effectively. Figure 2 highlights equities against the National Defense Strategy and shows the range of possible duty statuses to reveal the overlapping state-Federal relationship. Viewed in this manner, it is apparent why every state considers essential programs such as Weapons of Mass Destruction Civil Support Teams, CBRNE Enhanced Response Force Packages, and National Guard Rapid Reaction Forces.

Activating a state command is relatively simple because state emergency management plans integrate the capabilities of state National Guard units and in some cases those of neighboring states. For example, Florida and Georgia have standing agreements for sharing resources in addition to the EMAC, which can tap resources nationally.

Another advantage of state command is that emergency management personnel, first responders, and Guardsmen at all levels are

County sheriff briefs Wisconsin State National Guard officials on flood damage assessment

U.S. Air Force (Paul Gorman)

typically highly networked and have a comprehensive understanding of the local political, geographic, social, cultural, and industrial environment. At the senior level of state government, the adjutant general, state emergency management director, and director of homeland security are usually members of the Governor's cabinet, and their respective organizations are tightly integrated. In several states, the adjutant general is triple hatted with all three responsibilities. In many other states, the adjutant general wears the hat of the emergency management director or the director of homeland security.[10]

Exercising a pure state command option creates an inherently fast National Guard response because Guard units are community based throughout the Nation. The ability to generate forces rapidly from over 3,200 locations nationwide is essential to being effective on the ground within the first 72 hours of a disaster. The fact that over 2,500 Guardsmen participated in the New York City response on 9/11 is proof of this statement. Finally, because the National Guard is a Reserve force, it provides a tremendous return on investment from a fiscal perspective. Because the majority of its members are part-time, and the full-time expenses associated with Active-duty personnel are avoided in steady-state operations, National Guard personnel costs are dramatically lower.

The key disadvantage of the state command option is that it cannot absorb Federal military capability under its authority. For example, under emergency response authority, Federal military forces can only coordinate with the National Guard because of separate legal authorities. The inherently limited statutory framework of the state command option means achieving true unity of effort is not possible. Lessons learned from Hurricane Katrina document this conclusion well.

Parallel Command. The second command option introduces Federal military forces under the command and control of USNORTHCOM. For civil support operations, the Federal military responds to DOD-approved requests that originate from an incident command within a state, and USNORTHCOM employs capabilities that operate in parallel with state Guard forces. The underlying assumption for this approach is that the Federal military is available and prepared to respond. Additionally, it is assumed that the National Guard will already be operationally engaged, given their proximity and ability to respond rapidly.

Parallel state/Federal commands have been used exclusively since Operation *Winter Freeze* in 2004 for operations ranging from the deployment of Navy salvage divers to multiple JTFs with thousands of troops. In all cases, USNORTHCOM operates in support of a Federal agency responsible for an emergency support function (ESF) with the exception of ESF–3, Public Works and Engineering, which is the responsibility of the Army Corps of Engineers. The Federal response usually only occurs in support of the already ongoing state response.

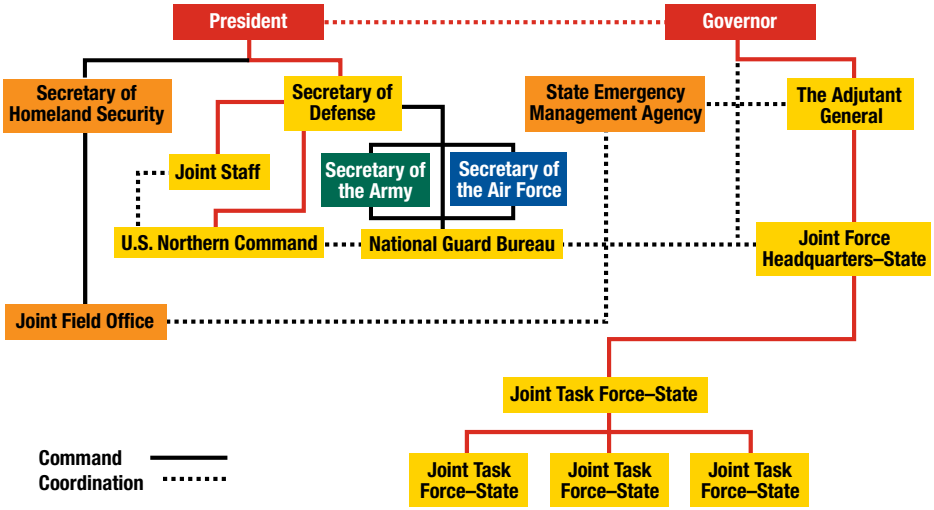
With respect to C^2, the concept of operations is to match an appropriate structure to meet the span of control requirements for the magnitude of the requested response. For example, in a small-scale operation, the defense coordinating officer may act as a joint force commander. For larger responses, a dedicated JTF or a functional component command may be employed.

The advantage of this approach is the ability to employ the resources of the Federal military in support of a disaster response. As a combatant command, USNORTHCOM can coordinate and direct joint Federal military forces at the strategic level to support the affected state. Federal and state military chains of command, authorities, and accountability are clear from the tactical level up.

The disadvantage of a parallel command operation is the increased complexity of activity coordination due to the division of command at the operational level. State

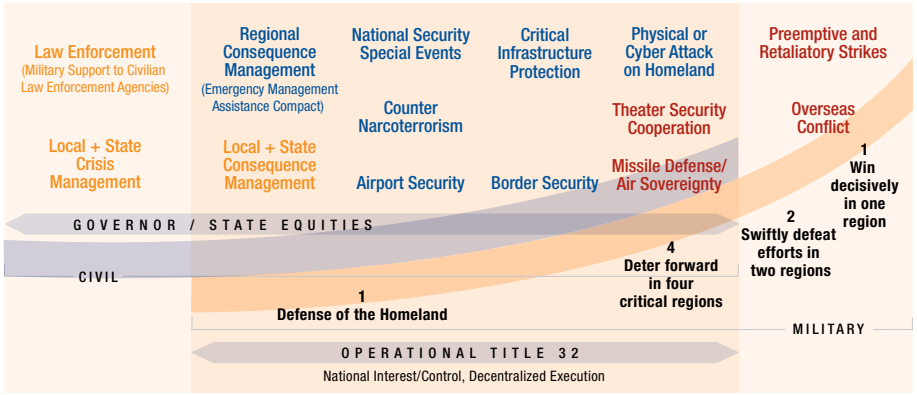
with a state-only Guard response, Governors retain their constitutional authority and control

Figure 1. State Command and Control of National Guard



Source: National Guard Bureau Briefing, March 30, 2007.
Key: Red lines illustrate relative chain of command.

Figure 2. Governor/State Equities



Source: LTG H. Steven Blum, Chief, National Guard Bureau, Domestic Operations Conference, Las Vegas, NV, March 21, 2006.

sovereignty is not challenged because the Federal military JTF is executing mission assignments generated from the joint field office in support of a state requirement. Parallel command military operations can be problematic in the chaotic environment of a disaster recovery because control of information, timely decisionmaking, synchronization, interoperability, and situational awareness are degraded when command and control is divided. The generic parallel C^2 structure depicted in figure 3 illustrates the organizational divide and the high degree of effective coordination that must occur at the operational and tactical levels for this option to be effective.

Parallel command arrangements are contrary to both civil and military doctrine. Under the authority of Presidential Directive 5, *Management of Domestic Incidents*, the National Incident Management System and the Incident Command System explicitly recognize the need for unity of command to clarify reporting relationships and eliminate the confusion of multiple, conflicting directives.[11]

Additionally, Joint Publication (JP) 1, *Doctrine for the Armed Forces of the United States*, specifies, "Command is central to all military action, and unity of command is central to unity of effort."[12] Moreover, JP 3–16, *Joint Doctrine for Multinational Operations*, emphasizes that the use of a parallel command structure should be avoided if possible because of the absence of a single commander.[13] Despite the universality of unified command doctrine and the authoritative nature of this guidance, the parallel command option has been employed with mixed results.

Dual-status Command. The dual-status command structure combines the advantages of the state command option and the parallel command option. The dual-status command structure addresses the unity of command dilemma directly. Under this construct, National Guard commanders on Title 32 status are ordered to Federal Active duty (Title 10 status), retaining their state commission when activated. This dual-status provides the statutory authority for one person to command both state and Federal military forces simultaneously. This permits the dual-hatted commander to control a unified military response at the operational level in support of the state. In figure 4, a notional dual-status command illustrates the chain of command beginning with the President and Governor. National Guard forces in state Active-duty or Title 32 status perform state missions under the authority of the Governor, and assigned Title 10 Federal forces perform defense support of civil authority for USNORTHCOM.

The advantages of the dual-status command include a Governor retaining authority over the response, clear lines of command, and the ability to integrate Federal military forces operationally to achieve unity of effort. Conversely, Presidential C^2 is preserved. Every advantage previously described for the state command applies to the dual-status command. Additionally, it promotes the control of information, timely decisionmaking, synchronization, interoperability, and situational awareness for both state and Federal forces. This option also complies with the congressional intent of United States Code 32, Section 325 and JP 1 with respect to establishing unity of effort.

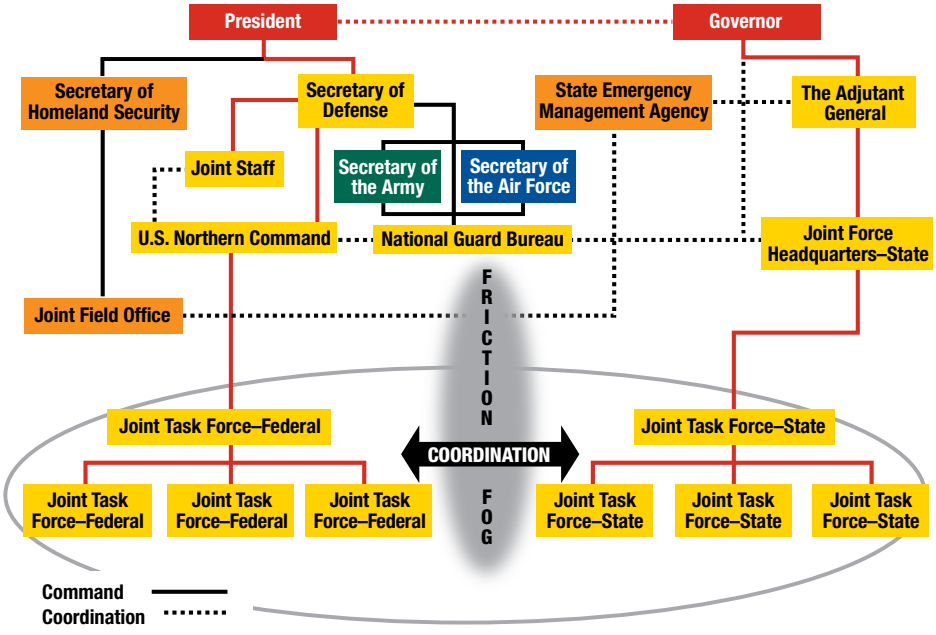
Another advantage of the dual-status command is that it has the ability to execute interstate operations with assigned Title 10 forces. This is possible because a dual-status commander with Title 10 authority can operationally direct Title 10 assigned forces regionally. Disasters such as an earthquake along the New Madrid fault line, which would affect multiple Midwestern states, could be effectively managed with dual-status commands located in each state with assigned Federal military forces. The operational flexibility to direct Federal forces to wherever they are most needed regionally would reduce current interstate gaps and improve the application of military capability.

parallel command arrangements are contrary to both civil and military doctrine

The disadvantages include the bureaucratic complexity of the present request process for dual-status approval, potential conflicting strategic level guidance, and separation of the legal lines of operation. For a dual-status command to be established, a commander must be authorized by the President and consented to by the Governor. Either sovereign executive may initiate the process. Conflicting strategic guidance can present problems for a dual-status commander. These unlikely conflicts would only originate between the President and a Governor, in which case a deadlock would require negotiation between both sovereign executives. Finally, a dual-status command risks utilizing state and Federal forces in operations prohibited by law. An example of this would be Federal forces performing law enforcement activities.

Federal Command. The final option is a pure Title 10 Federal command. In this arrangement, all National Guard forces are federalized and integrated with Active-duty forces under the command and control of USNORTHCOM. Resorting to this option is unlikely unless an extreme event unfolds and a state is completely

Figure 3. Parallel Command and Control



Source: Briefing, National Guard Bureau, March 30, 2007.
Key: Red lines illustrate relative chain of command.

overwhelmed and local government ceases to operate. Under these conditions, the President is constitutionally obligated to restore public order and enforce the laws of the United States.

The concept of operations is to mobilize National Guard forces using the JFHQ-State and integrate them into the responding Federal JTFs or functional component commands illustrated in figure 5. The Federal Government unilaterally makes decisions, and Presidential involvement is expected to be significant until functioning civil authority is restored in the affected state.

The advantages of a Federal command are that it preserves U.S. sovereignty, leverages the Total Force, and establishes unity of command and effort. The disadvantages include the compromise of state sovereignty, political cost of federalizing the National Guard, and economic cost of taking charge of the response.

Not having a standardized approach for command and control of civil support events is detrimental because it complicates response effectiveness and cohesion when they are most needed. Acknowledging that every disaster response will be unique, determining the option that optimizes National Guard and Federal military C^2 is problematic.

Recommendations

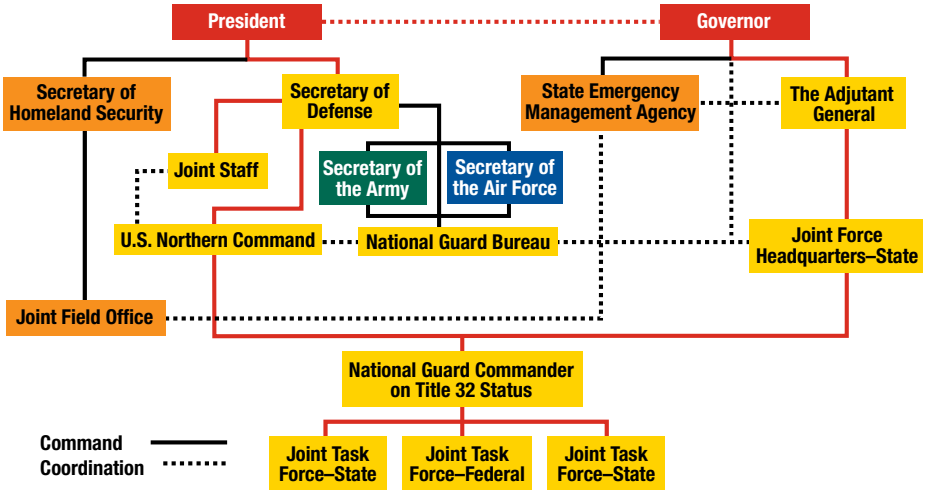
Recognizing that the first dual-status command in our nation's history was established in 2004, it is understandable that there is a reluctance to use it in a crisis when lives are on the line. However, when the benefits of a dual-status command and the polarizing effect that parallel commands have had on the Federal-state relationship are considered, it is counterproductive not to pursue the development of this hybrid arrangement. Therefore, the following recommendations should be adopted to guide DOD, USNORTHCOM, and NGB actions for developing dual-status command as the primary C^2 option for all domestic military civil support responses, including no-notice catastrophes, unless a Governor requests otherwise.

First, dual-status commanders should be preapproved to improve readiness and minimize bureaucratic obstacles during a contingency. Every state should certify at least two senior National Guard commanders in the Dual-Status Title 10/32 JTF Commander's course. This list of certified commanders should then be approved by USNORTHCOM and NGB and submitted to the respective state Governor for consent. Following the Governor's consent, the list should be coordinated with the Secretary of Defense and forwarded to the President for annual approval. This pool of preapproved commanders can then be quickly tapped for no-notice events. Finally, the President should issue a Presidential decision directive recognizing state and Federal responsibilities and order that dual-status command be used to the maximum extent practical for domestic operations. Following this directive, Governors should issue similar directives and gain approval from their respective state legislatures.

The second step in developing the expertise and competence required to execute a dual-status command is the training of future commanders and their staffs. Fortunately, a program sponsored by NGB in coordination with USNORTHCOM is currently providing dual-status JTF commander certification. What is missing is similar training for National Guard and Active-duty personnel who will provide the staff functions for the dual-status commander. These command staff personnel must efficiently interoperate, effectively coordinate with interagency partners, plan for domestic operations, and be aware of the

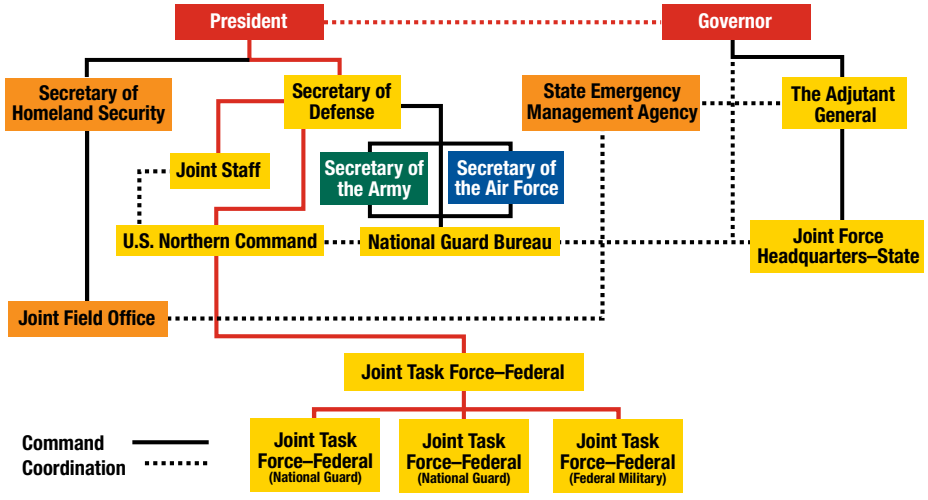
the advantages of a Federal command are that it preserves U.S. sovereignty, leverages the Total Force, and establishes unity of command and effort

Figure 4. Dual Status Command and Control



Source: Briefing, National Guard Bureau, March 30, 2007.
Key: Red lines illustrate relative chain of command.

Figure 5. Federal Command and Control



Source: Briefing, National Guard Bureau, March 30, 2007.
Key: Red lines illustrate relative chain of command.

legalities of combined state/Federal military operations.

Third, USNORTHCOM and National Guard exercises should be integrated to practice National Guard dual-status command, validate and refine plans, and provide National Guard and Federal leadership an opportunity to build relationships. This recommendation builds on developing staff expertise by exercising field units in tactical scenarios. Full-scale exercises that involve actual versus notional participants are key to refining blended state/Federal military operational issues, tactics, techniques, and procedures, which will be vital to delivering the maximum supporting or supported effects in a crisis. Additionally, exercises will help identify tactical, operational, and strategic issues with organizational structure, composition, and processes.

Fourth, it is recommended that each National Guard JFHQ-State in coordination with USNORTHCOM develop a dual-status concept of operations plan (CONPLAN) and draft a dual-status JTF memorandum of understanding for approval by the Secretary of Defense. The dual-status plan should address the five phases of support in CONPLAN 2501 with respect to dual-status command to ensure smooth staging, deployment, employment, and transition of Federal forces. Moreover, the CONPLAN should provide the guidance for operations plan (OPLAN) development and address the potential for states providing National Guard capability through mutual aid agreements and emergency management compacts. This will improve the planning transparency required to enhance Federal and state military operations and reduce confusion with interagency partners vertically and horizontally during execution. Additionally, developing dual-status triggers and embedding them into the concept of operations will reduce bureaucratic obstacles and streamline the establishment of dual-status commands, which in turn will increase the likelihood of their use.

Finally, DOD, USNORTHCOM, and NGB should advocate for congressional authorization for automatic Federal recognition of acting dual-status JTF commanders in a temporary grade of O–8 for the duration of the command. The senior flag officer rank of an O–8 is essential to execute the duties of a dual-status commander effectively due to the rank discrepancies between the National Guard and Federal military. Additionally, the rank of O–8 will eliminate many organizational culture authority issues that may impede a response.

The opportunity cost of adopting these recommendations is marginal compared to the benefits that a dual-status command can deliver. The principal financial investment is in the exercises and staff training required to refine the tactics, techniques, and procedures for dual-status operations. The cost of developing the CONPLAN, OPLANs, and staffing of certified dual-status commanders is negligible.

The primary consequence of taking these actions will be on the existing USNORTHCOM and National Guard exercise programs. In particular, USNORTHCOM will need to expand or modify its exercise program to accommodate these new requirements. Implementing these steps will likely lead to an expanded footprint of National Guardsmen serving in Title 10 status at USNORTHCOM and the establishment of an Active-duty presence at the NGB as a result of increased need for collaboration. This will likely meet resistance initially due to the organizational change and the strain it will place on all stakeholders, but as personnel are educated and gain experience, misconceptions will be dismissed because the practical benefits of dual-status command will become obvious. For example, DOD concern over serving under state command will be dispelled, because under a dual-status command, Federal military personnel are always under Federal command.

To be sure, developing a reliable dual-status command option in every state will take time and effort, but neglecting its development as a viable alternative for our civil leadership is counterproductive. Dual-status command can be a win-win approach for the Federal military, National Guard, and the American people if given a chance.

The Department of Defense, U.S. Northern Command, and the National Guard Bureau must act now to eliminate the barriers to implementing dual-status commands and reverse the counterproductive policy of relying exclusively on parallel command for contingency operations. Preapproving commanders, training staffs, integrating domestic exercises, developing coordinated plans, and providing the requisite authority to execute this command arrangement will lay the foundation for optimizing the choices that our civil and military leadership will need to respond successfully in future disasters. Delaying action on this front will further exacerbate tenuous relationships, waste valuable political capital, and put lives and property at risk unnecessarily. **JFQ**

NOTES

[1] Richard B. Cheney, remarks before the Indiana Air and Army National Guard, Camp Atterbury, IN, October 20, 2006, available at <www.whitehouse.gov/news/releases/2006/10/images/20061020-3_v102006db-0130jpg-515h.html>.

[2] As defined by the *Department of Defense Strategy for Homeland Defense and Civil Support* (Washington, DC: Department of Defense, 2005), *homeland defense* is the protection of U.S. sovereignty, territory, domestic population, and critical defense infrastructure against external threats and aggression, or other threats as directed by the President.

[3] U.S. Code, *Homeland Defense Activities: Funds* (32 USC § 902), accessed September 15, 2007, at <www.law.cornell.edu/uscode/html/uscode32/usc_sec_32_00000902----000-.html#FN-1REF>.

[4] *Department of Defense Strategy for Homeland Defense and Civil Support*, 35.

[5] U.S. Executive Office of the President, *The Federal Response to Hurricane Katrina: Lessons Learned* (Washington, DC: The White House, February 2006), 43.

[6] Author interview with Brian Newby, chief of staff, Office of the Governor, Texas, December 4, 2007.

[7] Robert Block and Amy Schatz, "Local and Federal Authorities Battle to Control Disaster Relief," *Wall Street Journal*, December 8, 2005, available at <http://online.wsj.com/article/SB113401254148017116.html>.

[8] As defined by the *National Strategy for Homeland Security* (Washington, DC: Office of Homeland Security, July 2002), *homeland security* is the concerted national effort to prevent terrorist attacks within the United States, reduce America's vulnerability to terrorism, and minimize the damage and recover from attacks that do occur.

[9] National Guard Bureau, "Joint Force Headquarters–State Fact Sheet," available at <www.ngb.army.mil/features/HomelandDefense/jfhq/JFHQ-State.doc>.

[10] Timothy J. Wright, director of operations, National Guard Bureau, "Keynote Address," available at <http://proceedings.ndia.org/7030/Wright-Keynote_Brief.pdf>.

[11] Department of Homeland Security, *National Incident Management System* (Washington, DC: U.S. Government Printing Office, 2004), 11.

[12] Joint Publication (JP) 1, *Doctrine for the Armed Forces of the United States*, May 2007, IV–1.

[13] JP 3–16, *Joint Doctrine for Multinational Operations*, March 2007, II–7.

Terrorist Violence in the New Millennium
New Legal Solutions for an Old Nemesis

By **JAMES P. TERRY**

In addressing the postconflict terrorist threat in Iraq, and the earlier terrorist attacks directed from al Qaeda in September 2001, President George W. Bush was addressing not a new phenomenon, but certainly a level of violence unusual to that genre. In fact, the crisis in Afghanistan and the earlier hostage-taking in Iran in 1979–1980 provided cogent lessons. Nor were those the first. During his Presidency, for instance, James Monroe established the right to enter the territory of another state where the host is unable or unwilling to quell a continuing terrorist threat. The Seminole Indians in Spanish Florida had demanded "arms, ammunition and provisions or the possession of the garrison at Fort Marks."[1] President Monroe directed General Andrew Jackson to proceed against the Seminoles, with the explanation that the Spanish "were bound by treaty to keep their Indians at peace, but were incompetent to do so."[2]

During the Canadian insurrection of 1837, the standard for justifiable anticipatory self-defense that could legally be exercised by the Commander in Chief during terrorist threats was more clearly established.[3] Anti-British sympathizers gathered near Buffalo, New York. A large number of Americans and Canadians were similarly encamped on the Canadian side of the border, with the apparent intention of aiding these rebels. The *Caroline*, an American vessel the rebels used for supplies and communications, was boarded in an American port at midnight by an armed group acting under orders of a British officer, who set the vessel on fire and let it drift over Niagara Falls. The United States protested the

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UK MOD

Cave complex housing munitions destroyed in Afghanistan, Operation *Snipe*, 2002

incident, which claimed the lives of at least two American citizens. The British government replied that the threat posed by the *Caroline* was established, that American laws were not being enforced along the border, and that the destruction was an act of necessary self-defense to terrorist violence.

In the controversy that followed, the United States did not deny that circumstances were conceivable that would justify this action, and Great Britain admitted the necessity of showing circumstances of extreme urgency. The two countries differed only on the question of whether the facts brought the case within the exceptional principle. Charles Cheney Hyde summed up the incident by saying that "the British force did that which the United States itself would have done, had it possessed the means and disposition to perform its duties."[4] Secretary of State Daniel Webster, in formulating an oft-cited principle of self-defense, said that there must be a demonstrated "necessity of self-defense, instant, overwhelming, leaving no choice of means and no moment of deliberation."[5] It is clear, however, that the Webster formulation was *not* applied by the British in the decision to destroy the *Caroline*, at least with respect to the element requiring "no moment of deliberation." The U.S. Department of State has properly criticized Secretary Webster's formulation as follows: "This definition is obviously drawn from consideration of the right of self-defense in domestic law: the cases are rare indeed in which it would fit an international situation."[6] Today, when terrorists and their sponsors possess weapons with rapid delivery capabilities, any requirement that a nation may not respond until faced with a situation providing no moment of deliberation is unrealistic.

In the modern era, four Presidents have faced major incidents of terrorist violence that have impacted the vital national interests of the United States. The November 1979 seizure of U.S. diplomats by Iranian militants protected by the Iranian government, and the administration's ineffective response, was likely responsible for President Jimmy Carter's defeat by Ronald Reagan in the 1980 election. In 1986, President Reagan's second administration acted forcefully to address the threat by Muammar Qadhafi's Libyan terrorist organization after an attack on U.S. citizens in West Germany. This military action against Qadhafi followed precisely the articulation of Presidential prerogatives set forth earlier by President Reagan in National Security Decision Directive (NSDD) 138. While President Bill Clinton took no direct action after attacks on two American Embassies and on the USS *Cole*, he did reorganize our internal policymaking bodies responsible for counterterrorism.

In responding forcefully and effectively to the 2001 al Qaeda attacks on the World Trade Center and the Pentagon, President Bush properly viewed the attacks not as terrorist violence per se, but as military attacks on America that demanded the full weight of a U.S. response. It has been his careful articulation of a new policy toward the threat of terrorism in the two National Security Strategies issued at the beginning of his first and second terms, respectively, that will provide the roadmap for future response to terrorist violence.

Iranian Hostage Crisis

President Carter faced an administration-altering terrorist incident in the waning days of his tenure in office. On November 4, 1979, approximately 300 militant demonstrators overran the U.S. Embassy compound in Tehran and took 52 U.S. citizens hostage for 444 days. The attacks took place only 1 week after the Shah entered the United States for medical treatment.

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As in most developing countries, there were few internal constraints in Iran—whether from opposition parties, a critical press, or an enlightened public—to pressure Ayatollah Ruhollah Khomeini, the Iranian leader, to uphold the law. In the atmosphere of fervent nationalism that accompanied Khomeini's sweep to power, forces for moderation were depicted as tools of foreign interests. In such an atmosphere, the militant supporters of the clerical leadership fomented domestic pressure to violate other recognized norms as well—in areas such as property ownership, religious freedom, and judicial protection. This combination of revolution and nationalism yielded explosive results—a reordering of both Iranian domestic society and Iran's approach to foreign affairs.

It was President Carter's lack of resolve in addressing the crisis that proved costliest to his administration, however. While the United Nations Security Council, at the behest of the United States, unanimously adopted Resolution 457 on December 4, 1979, calling on the government of Iran "to release immediately the personnel of the Embassy of the United States of America being held in Tehran, to provide them protection and allow them to leave the country,"[7] there was no accompanying threat of imminent military action on the part of the United States. Resolution 457 also requested that the Secretary General lend his good offices to the immediate implementation of the resolution and that he take all appropriate measures to that end.

While the United States, through Secretary of State Cyrus Vance, was able to secure repeated Security Council measures requiring Iran to comply with its international obligations, there were no sanctions included, as a result of a Soviet veto. In the subsequent U.S. application to the International Court of Justice,[8] the court on December 15, 1979, unanimously ruled that Iran should release the hostages and restore seized premises to exclusive American control.[9] Iran ignored this ruling.

When diplomatic efforts at securing the hostages' freedom via diplomacy failed in the United Nations and through legal means in the International Court of Justice, President Carter banned U.S. purchases of Iranian oil under the Trade Expansion Act.[10] His intent was to make clear that the United States would not be blackmailed because of oil requirements.[11] The United States then learned that Iran planned to withdraw all assets held in American banking institutions. The removal of funds would have jeopardized billions of dollars in American claims against those assets—debts owed to both government and private enterprise. The ripple effect of a mass withdrawal would have threatened the entire international financial system.

The President acted quickly to protect the interests of American creditors by blocking the removal of the Iranian funds, invoking the International Emergency Powers Act of 1977,[12] which permits the freezing of foreign assets when there exists "an unusual and extraordinary threat to the national security, foreign policy, and economy of the United States."[13] The Secretary of the Treasury implemented the President's Executive order on November 14, 1979, with a series of measures called the Iranian Assets Control Regulations.[14]

A month later, the United States informed the Iranian chargé d'affaires in Washington that

personnel assigned to the Iranian Embassy and consular posts in the United States would be limited to 15 at the Embassy and 5 per consulate.[15] From January to March 1980, the United States exercised restraint in generating additional pressure to allow the initiatives of Secretary General Kurt Waldheim to work along with those of intermediaries. Factional disputes prevented President Abolhassan Banisadr and other Iranian authorities from honoring their pledges regarding the authority of the United Nations Commission in Iran and this in turn stifled Waldheim's diplomatic initiatives.

President Carter then moved to impose unilateral sanctions on Iran, and in April 1980, all financial dealings and exports to Iran except food and medicine were prohibited.[16] On April 17, 1980, the Carter administration imposed additional prohibitions on imports, travel, and financial transfers related to Iran.[17] This Executive order also restricted travel under the Immigration and Nationality Act.[18] Finally, in April 1980, the United States broke diplomatic relations and ordered the Iranian embassy in Washington closed.

While these unilateral measures were being implemented, American allies in Europe, along with Japan and Canada, were imposing economic and diplomatic sanctions against Iran in an effort to maintain a common front. At the April 21, 1980, meeting of the leaders of the European Community, nine allied nations reaffirmed their support for severe sanctions against Iran and stated that they would seek legislation enabling them to join the effort to isolate Iran internationally in the event the hostage crisis had not been resolved by May 17, 1980.[19] When no progress had been made by that date, these allies moved to accommodate the U.S. request that no new contracts be entered into with Iran and that all contracts negotiated between these nations and Iran after November 4, 1979, be disavowed.

Unfortunately, several European states, Great Britain included, were unable to gain parliamentary support for the entire package of sanctions promised. Thus the impact, while significant, failed to isolate Iran completely from a vital source of imports—Europe. The Soviet Union compounded the problem of incomplete support when it announced that if Iranian ports were blockaded or primary commodities became unavailable from the West, the Soviet Union would neutralize the impact of such measures by providing all necessary assistance. Specifically, the Soviet Union offered its roads and railway system to move goods if Iran's harbors should be blocked.[20] It also promised to supply Iran with primary foodstuffs if these became unavailable from customary sources.[21]

The economic measures adopted by the Western nations, while psychologically satisfying, proved singularly ineffective. In fact, the only noticeable impact was a rallying of Iranians behind Khomeini and the diversion of Iranian attention from internal difficulties to the foreign challenge. These measures tended to fragment international support for the United States while making it politically difficult for the Iranians to back down. In short, economic pressures, although perhaps politically expedient as a means to demonstrate Presidential resolution, had the counterproductive effect of unifying Iranian opposition without coercing cooperation.

Concurrently with its judicial, diplomatic, and economic initiatives, in November 1979 the United States began planning a military operation to rescue the hostages. Citing the same legal justification claimed by Israel in rescuing its citizens from terrorists at Entebbe, Uganda, and by West Germany in a similar successful rescue at Mogadishu, Somalia, in 1977,[22] the United States entered Iran during the night of April 24, 1980. A team of approximately 90 American Servicemembers departed the aircraft carrier *Nimitz* by helicopter for a remote, deserted airstrip in southern Iran, approximately 300 miles from Tehran. There they rendezvoused with a C–130 transport aircraft for refueling. The plan then called for a flight from this rendezvous to Tehran.[23] However, when three of the eight RH–53 helicopters were disabled by mechanical failures resulting from sand intake,[24] the mission was aborted and the remaining aircraft departed Iran, but not before a helicopter and transport collided and exploded.[25]

With respect to the Americans held, the 1961 Vienna Convention on Diplomatic Relations[26] obligated Iran to treat each American diplomat with "due respect," to take "all appropriate steps to prevent any attack on his person, freedom, or dignity," and to ensure that diplomatic personnel were not subjected to "any form of arrest or detention." Article 37 extends these same privileges and immunities to members of the administrative and technical staffs as well as their families. These protections embody "the oldest established and the most fundamental rule of diplomatic law,"[27] a point repeatedly emphasized by the International Court of Justice in its December 15, 1979, order discussing provisional measures with

economic pressures, although perhaps politically expedient to demonstrate Presidential resolution, had the counterproductive effect of unifying Iranian opposition without coercing cooperation

Carter Administration's unilateral approach to Iranian hostage crisis failed

DOD

respect to the American hostages.[28] In addition to its obligation to protect diplomatic personnel, Iran also had a duty to bring the attacking militants to justice. Its failure to take either step laid the groundwork for subsequent American claims for reparations.

In retrospect, certain implications of the 444-day Iranian hostage crisis are now clear. The continued vitality of mutual world values depends on much more than a search for national catharsis. The American public's penchant for gestures such as candlelight vigils and yellow ribbons was matched by the Carter administration's tendency to confuse symbol with substance and to adopt pose in the name of policy. Time was perceived as being on the side of the Iranians. It appeared that the crisis controlled Carter rather than Carter the crisis.

In the longer term, President Carter's attempt to embrace all options other than the direct use of military force resulted in a settlement favorable to Iran. A country that confuses catharsis with defense of its interests is a nation uncertain of its values, and Carter's effort to eschew the military instrument in favor of all others proved to be counterproductive. Reagan's pledge during the 1980 campaign of "swift and effective retribution" in case of further threats to Americans abroad was clearly meant to deter future attacks as well as reassure a concerned nation. It also assured his election.

Upon his inauguration and the release of the hostages, President Reagan found himself bound by the terms of the Carter administration's negotiated settlement, terms that the Supreme Court upheld as legal, if not wise.[29] Some of the terms, such as the requirement to return unencumbered Iranian financial assets, did no more than honor a preexisting obligation. Other commitments that pertained directly to the official relationship between the United States and Iran, such as the formation of a joint U.S.-Iranian claims tribunal, were also honored as positive contributions to community values.

Some parts of the agreement, however, were legally unenforceable. One such provision was the requirement that the United States would order all persons within U.S. jurisdiction to report to the U.S. Treasury within 30 days for transmission to Iran of all information known to them as of November 3, 1979, with respect to the property and assets of the former Shah. Violation of the requirement would be subject to civil and criminal penalties described by U.S. law.[30] No such order was ever issued, but had it been, it could not have been enforced.

Navy pilots prepare for retaliatory strikes against Libya during Operation *El Dorado*, 1986

U.S. Navy (David Lee)

The Case of Libya

One of President Reagan's strongest attributes was his direct approach in responding to threats to the American people. When he took office, he engaged scholars at the war colleges to begin a review of available options to address the increased incidence of terrorist violence worldwide. Early in 1984, the President issued the seminal "preemption" doctrine addressing response to terrorist violence. In the words of former Defense Department official Noel Koch, President Reagan's NSDD 138, issued April 3, 1984,[31] "represent[ed] a quantum leap in countering terrorism, from the reactive mode to recognition that pro-active steps [were] needed."[32] Although NSDD 138 remains classified to this day, National Security Advisor Robert C. McFarlane suggested at the Defense Strategy Forum on March 25, 1985, that it included the following key elements: the practice of terrorism under all circumstances is a threat to the national security of the United States; the practice of international terrorism must be resisted by all legal means; the United States has the responsibility to take protective measures whenever there is evidence that terrorism is about to be committed; and the threat of terrorism constitutes a form of aggression and justifies acts in self-defense.[33]

It is the linkage between the terrorist and the sponsoring state that is crucial to providing the United States, or any nation, with the justification for response against a violating state. Covert intelligence operatives are necessary for identifying and targeting terrorist training camps and bases and for providing an effective warning of impending attacks. Unfortunately, as noted by former Secretary of State George Shultz in 1984, "we may never have the kind of evidence that can stand up in an American court of law."[34]

Although no U.S. administration official has been able to define adequately "how much evidence is enough," the demand for probative, or court-sustainable, evidence affirming the complicity of a specific sponsoring state is an impractical standard that contributed to the impression—prior to the articulation of NSDD 138—that the United States was inhibited from responding meaningfully to terrorist outrages. This view was certainly reinforced in 1979, as addressed above, when the U.S. Government allowed American citizens to remain hostage to Iranian militants. Hugh Tovar has correctly noted that "there is a very real danger that the pursuit of more and better intelligence may become an excuse for nonaction, which in itself might do more harm than action based on plausible though incomplete intelligence."[35]

one of President Reagan's strongest attributes was his direct approach in responding to threats to the American people

True to his commitment under NSDD 138, and consistent with his 1980 campaign pledge to effect "swift and effective retribution" in case of further threats to Americans abroad, President Reagan directed military force against Libyan terrorists on April 15, 1986. On that date, the United States launched defensive strikes on military targets in Tripoli and Benghazi, Libya. The use of force was preceded by conclusive evidence of Libyan responsibility for prior acts of terrorism against the United States, with clear evidence that more were planned. The final provocation occurred in West Berlin on April 5, when 2 U.S. citizens were killed and 78 were injured by an explosive device in a discotheque.

Eleven days earlier, on March 25, a cable from Tripoli directed the Libyan People's

Bureau in East Berlin to target U.S. personnel and interests. On April 4, a return message was intercepted that informed Colonel Qadhafi's headquarters that a terrorist attack would take place the next day. On April 5, the same People's Bureau reported to Colonel Qadhafi that the attack was a success and "could not be traced to the Libyan people."[36] The next day, Tripoli exhorted other People's Bureaus to follow East Berlin's example.[37]

The April 1986 response used F–111 bombers from an American airbase in Great Britain and A–6 fighter-bombers from two aircraft carriers in the Mediterranean to strike five Libyan bases. The United States responded only after it was determined that the Libyan leader was clearly responsible for the April 5 bombing, that he would continue such attacks, and, after an assessment that the economic and political sanctions imposed after the Rome and Vienna airport bombings had been unsuccessful, that Washington's West European allies were unwilling to take stronger joint steps against Qadhafi. A clear linkage existed between the threat perceived and the response directed against Libyan military targets.

President Reagan summed up the U.S. view of Qadhafi's complicity in supporting international terrorism when he spoke to the Nation immediately following the April 15, 1986, defensive response by U.S. warplanes:

Colonel [Qadhafi] *is not only an enemy of the United States. His record of subversion and aggression against the neighboring states in Africa is well documented and well known. He has ordered the murder of fellow Libyans in countless countries. He has sanctioned acts of terror in Africa, Europe and the Middle East as well as the Western Hemisphere.*[38]

The United States directed its response to continuing Libyan violence at military targets only. The objective was to strike at the military "nerve center" of Qadhafi's terrorist operations and limit his ability to use his military power to shield terrorist activities, thereby "raising the costs" of terrorism in the Libyan leader's eyes and "deterring" him from future terrorist acts.[39] Press Secretary Larry Speakes advised that the American raids on Libya "were justified on grounds of 'self-defense' to preempt further Libyan attacks."[40]

In an August 21, 1986, meeting in Luxembourg, the foreign ministers of 12 European states reflected the profound effect the defensive raid had on inspiring allied efforts to resist terrorism. The ministers approved a package of diplomatic sanctions aimed at limiting Libya's ability to sponsor terrorist attacks, which had been rejected only a week earlier.[41] These sanctions were endorsed and refined during the Tokyo Economic Summit in May 1986, when President Reagan met with the leaders of Britain, Canada, France, Italy, Japan, and West Germany, as well as other representatives of the European Community. It is noteworthy that the United States essentially had to act alone against Libya, following Qadhafi's implication in the 1985 Vienna and Rome airport bombings. In April 1986, however, the U.S. use of force suddenly spurred more active support among the allies.

President Clinton speaks at memorial service for Sailors killed in attack on USS *Cole* in Yemen

U.S. Navy (Joshua Treadwell)

This allied support, even though offered only after the fact, suggested that the allies viewed the April 15, 1986, U.S. actions to be proportional to the perceived threat. Proportionality in the Libyan case could be assessed from a dual perspective. First, this element of self-defense required that U.S. claims, in the nature of counterterrorist goals, be reasonably related to the existing terrorist threat to U.S. national interests. Second, proportionality mandated that the United States and other offended states use only such means in addressing terrorist violence as were required to induce termination of the offending course of conduct. In the first sense of proportionality, the U.S. actions in 1986 sought only to neutralize the broad effort to overthrow the power balance in the Mediterranean region through terrorist violence. The American response did not seek to create a new alignment of that balance in North Africa. In the second sense of proportionality, the defensive strikes were restricted to military installations behind which Qadhafi's terrorist infrastructure was concealed.

Response to terrorism, like response to other forms of armed conflict, has as its principal purpose termination of hostilities under favorable conditions. Having forcefully demonstrated that the United States would respond to weaken Libya's military support for terrorist violence, President Reagan's follow-on moves were clearly appropriate. The President, through his support for coordinated diplomatic and economic sanctions at the April 21, 1986, European Community ministerial session, and his plea for concerted action at the follow-on Economic Summit in Tokyo, emphasized that nonmilitary coercive measures against a pariah state are only effective if all the major free nations participate. If the blow against Libya was to do more than reestablish the credibility of U.S. forces, an

the objective was "raising the costs" of terrorism in the Libyan leader's eyes and "deterring" him from future terrorist acts

integration of strategies involving those nations trading with Libya was imperative.

The Libyan incident does not suggest the lack of international law restraints on the determination of necessity for preemptive action. Rather, it affirms that a self-defense claim must be appraised in the total context in which it occurs. One aspect of this contextual appraisal of necessity, especially as it relates to responding after the fact to terrorist violence, concerns the issue of whether force can be considered necessary if peaceful measures are available to lessen the threat. To require a state to tolerate terrorist violence without resistance, on the grounds that peaceful means have not been exhausted, is absurd. Once a terrorist attack has occurred, the failure to consider a military response would play into the hands of aggressors who deny the relevance of law in their actions. The legal criteria for the proportionate use of force are established once a state-supported terrorist act has taken place. No state is obliged to ignore an attack as irrelevant, and the imminent threat to the lives of one's nationals requires consideration of a response.

Nairobi, Dar es Salaam, and the USS *Cole*

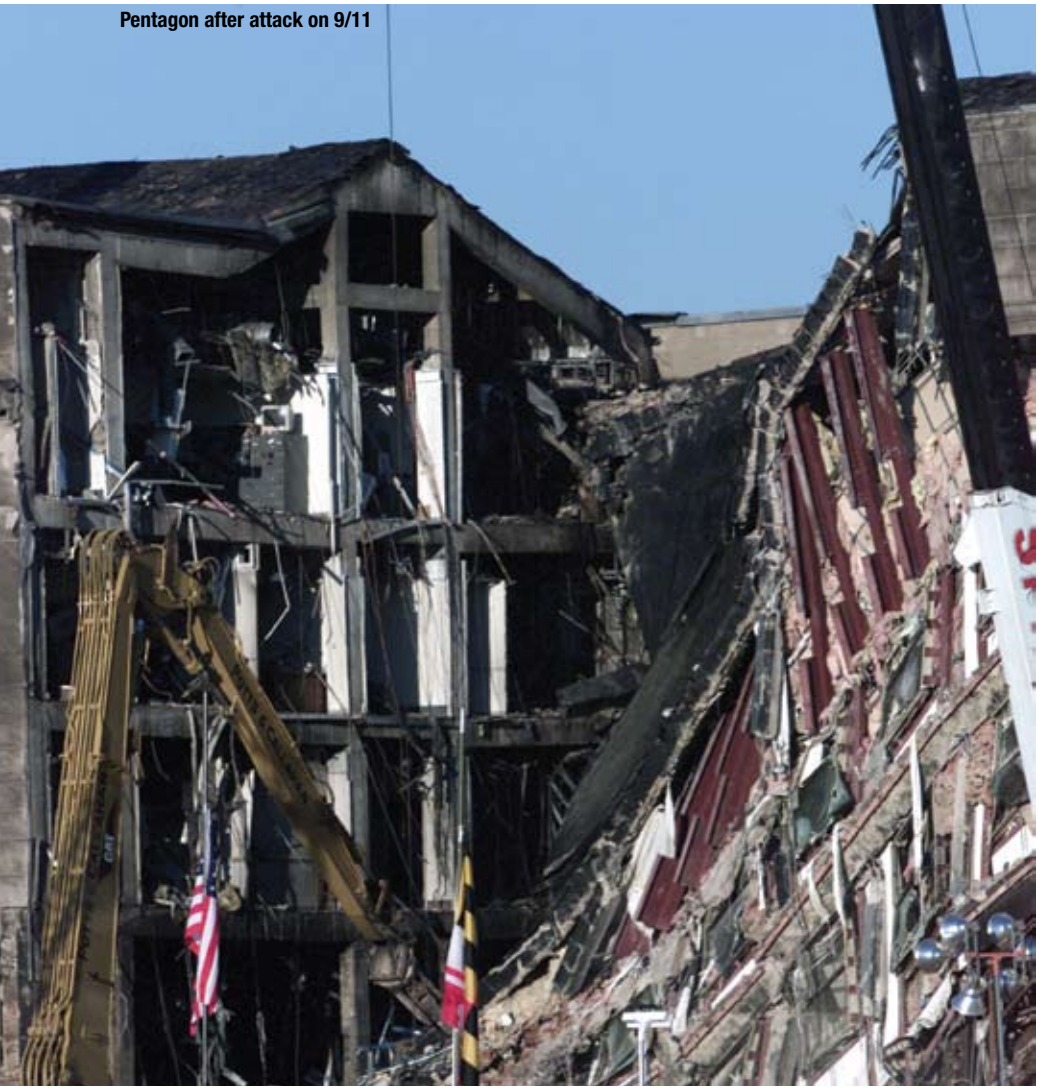
Although the United States under the Clinton administration suffered three significant attacks against U.S. facilities abroad—the Embassies in Nairobi and Dar es Salaam in 1998 and the attack in Yemeni waters against the USS *Cole* in 2000—President Clinton never responded directly to these attacks. His administration did, however, do much to address the terrorist threat through development of a comprehensive counterterrorism structure. When he signed Executive Order (EO) 13010 on July 15, 1996, President Clinton established the Commission on Critical Infrastructure Protection (CCIP). The President declared that certain designated "national infrastructures are so vital that their incapacity or destruction . . . would have a debilitating impact on the defense or economic security of the United States."[42] The eight categories of critical infrastructure designated in the EO as requiring the development of a national strategy for protection included:

- continuity of government
- telecommunications
- transportation
- electric power systems
- banking and finance
- water supply systems
- gas and oil storage and transportation
- emergency services (medical, police, fire, and rescue).

Initially chaired by Robert T. Marsh, a retired Air Force general, the CCIP was tasked with developing a comprehensive national strategy for protecting critical infrastructure from electronic and physical threats. On October 13, 1997, the CCIP issued the unclassified version of its report entitled "Critical Foundations: Protecting America's Infrastructure." In addition to recognizing the challenge of adapting to a changing world, the report found that the existing legal framework was inadequate to deal with threats to critical infrastructure. Although the report itself provided few specifics, on May 22, 1998, the Clinton administration issued Presidential Decision Directives (PDDs) 62 and 63 in implementation of its policy framework.

President Clinton did much to address the terrorist threat through development of a comprehensive counterterrorism structure

PDD 62, *Combating Terrorism*, was the successor to NSDD 138, which determined that the threat of terrorism constitutes a form of aggression and justifies acts in self-defense.[43] PDD 62 was more expansive in its coverage than NSDD 138 and addressed a broad range of unconventional threats, to include attacks on critical infrastructure, terrorist acts, and the threat of the use of weapons of mass destruction. The aim of the PDD was to establish a more pragmatic and systems-based approach to protection of critical infrastructure and counterterrorism, with preparedness the key to effective consequence management. PDD 62 created the new position of National Coordina-



Pentagon after attack on 9/11

21st Mobile Public Affairs Detachment (John Valceanu)

tor for Security, Infrastructure Protection, and Counterterrorism, which would coordinate program management through the Office of the National Security Advisor.

PDD 63, *Critical Infrastructure Protection*, mandated that the National Coordinator, established in PDD 62, initiate immediate action between the public and private sectors to assure the continuity and viability of political infrastructures. The goal established within PDD 63 was to significantly increase security for government systems and a reliable, interconnected, and secure information system. A National Plan Coordination Staff integrated the plans developed by the various departments of government, which served as lead agencies within their respective areas of responsibility into a comprehensive National Infrastructure Assurance Plan, which is overseen by the National Infrastructure Assurance Council. The council includes representation from both the public and private sectors. Under the PDD, the Federal Bureau of Investigation's National Infrastructure Protection Center, established in February 1998, would continue to provide a control and crisis management point for gathering information on threats to critical infrastructure and for coordinating the Federal Government's response.[44] Together, these measures and the structure created, if implemented, would be invaluable in addressing current threats to the United States. Unfortunately, when two U.S. Embassies were attacked in the summer of 1998, and the USS *Cole* was the target of terrorist violence in the fall of 2000, implementation by the Clinton administration was totally lacking.

The al Qaeda Attacks

The 9/11 attacks presented new challenges to the Presidency and the effective exercise of Commander in Chief powers. Following the attacks, the rapid U.S. response by the Bush administration was only possible because of the clear linkage established between Osama bin Laden's organization and the assault on U.S. personnel and property. The thrust of the U.S. strategy by President Bush, outlined in NSDD 138 and reflected in Operation *Enduring Freedom* in Afghanistan, was to reclaim the initiative lost when the United States under President Clinton pursued a reactive policy toward unconventional threats and attacks, as represented by inaction in response to the attacks on its Embassies in Nairobi and Dar es Salaam and on the USS *Cole*.

To counter the worldwide al Qaeda threat, President Bush implemented the proactive policies later incorporated in the critically important 2006 National Security Strategy.[45] When President Bush released the National Security Strategy for his second term on March 16, 2006, his administration continued the emphasis on preemption articulated in his 2003 speech at West Point and included the points made earlier in the National Security Strategy announced for his first term in 2002.[46]

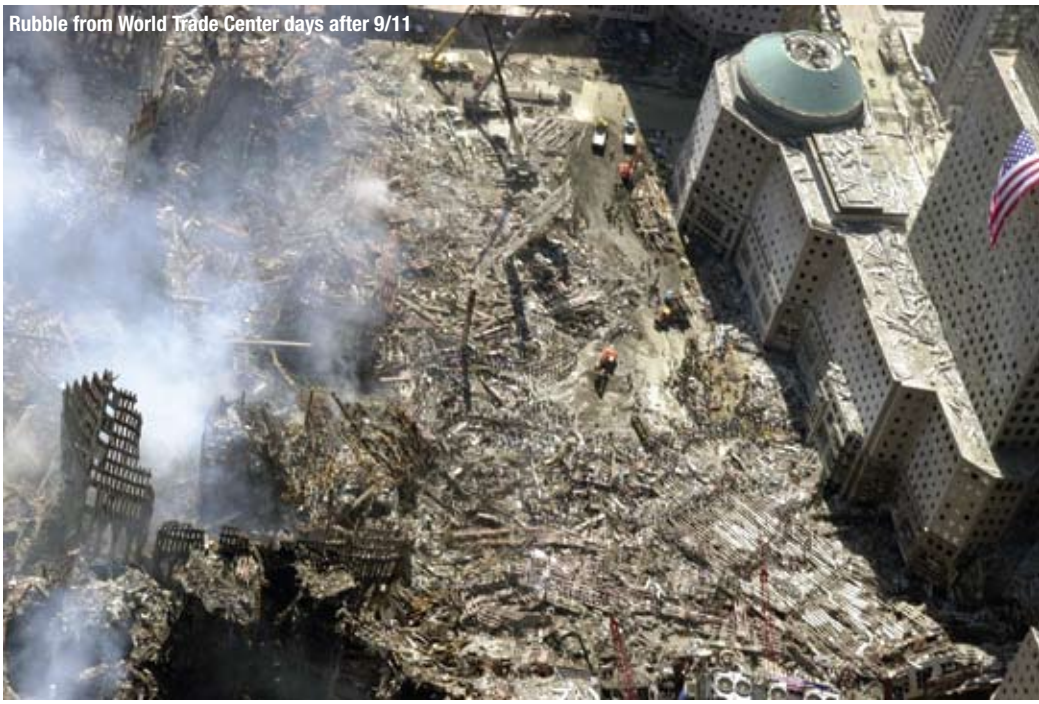
when President Bush released the National Security Strategy for his second term, his administration continued the emphasis on preemption

In the *Washington Post*'s review of the 2006 Strategy, Peter Baker, like other writers around the country, suggested that:

The strategy expands on the original security framework developed by the Bush Administration in September 2002, before our invasion of Iraq. That strategy shifted U.S. foreign policy away from decades of deterrence and containment toward a more aggressive stance of attacking enemies before they attack the United States.[47]

The doctrine of preemption was certainly put in context for the current terrorism threat in the 2002 National Security Strategy, just as it was updated in 2006 for the second term. The language in the current version clearly relates the doctrine to events in Iraq and elsewhere that are creating current threats. For example, one section is entitled "Prevent attacks by terrorist networks before they occur."[48] Another section claims, "We are committed to keeping the world's most dangerous weapons out of the hands of the world's most dangerous people."[49] A further section states, "We do not rule out the use of force before attack occurs, even if uncertainty remains as to the time and place of the enemy's attack."[50] The doctrine of preemption, or anticipatory self-defense as it is otherwise known, was clarified in terms of its use by the Bush administration, just as it had been by the Reagan Presidency, which was the first to formally adopt this venerable legal principle as an administration policy.

These policies required that we make the fullest use of all the weapons in our arsenal. These include not only those defensive and protective measures that reduce U.S. systems vulnerability, but also new legal tools and agreements on international sanctions, as well as the collaboration of other concerned governments. While we should use our military



Rubble from World Trade Center days after 9/11

U.S. Air Force (Michelle Leonard)

power only as a last resort and where lesser means are not available, there will be instances where the use of force is the only alternative to eliminate the threat to critical civil or military infrastructure. The response to al Qaeda posed such a requirement.

The Road Ahead

The thrust of the roadmap articulated in the 2002 and 2006 National Security Strategies, if it is to be effective, has to reclaim the initiative lost while the United States pursued a reactive policy to incidents of unconventional warfare under the prior Presidency, which neither deterred terrorists nor engaged in effective response. The key to an effective, coordinated policy to address the threat posed by those willing to target our critical infrastructure in New York and at the Pentagon is the commitment to hold those accountable responsible under the Law of Armed Conflict.

Full implementation of the Bush National Security Strategy, as in that articulated by President Reagan, should lead to increased planning for protective and defensive measures to address this challenge to our national security and, where deterrence fails, to respond in a manner that eliminates the threat—rather than, as prior to the articulation of National Security Decision Directive 138 by President Reagan, treating each incident after the fact as a singular crisis provoked by international criminals. By treating terrorists and others attempting to destroy America's critical infrastructure as participants in international coercion where clear linkage can be tied to a state actor, the right of self-defense against their sponsor is triggered, and responding coercion (political, economic, or military) may be the only proportional legal response to the threat. **JFQ**

NOTES

[1] John Bassett Moore, *Digest of International Law*, vol. 2 (Washington, DC: U.S. Government Printing Office, 1906), 404.

[2] Ibid.

[3] Ibid., 409–414.

[4] Charles C. Hyde, *International Law, Chiefly as Interpreted and Applied by the United States*, 2d ed. (Boston: Little, Brown, 1945), 240.

[5] Moore, 412.

[6] *Participation in the North Atlantic Treaty of States Not Members of the United Nations*, Hearings before the Senate Committee on Foreign Relations on the North Atlantic Treaty, 81st Cong., 1st Sess., 1949, 101–102.

[7] United Nations Security Council Resolution 457, December 4, 1979.

[8] The arguments made on behalf of the United States for interim measures are reported verbatim in U.S. Department of State, *Selected Documents*, no. 15 (1979), 2.

[9] Order of December 15, 1979, *United States v. Iran*, Provisional Measures, International Court of Justice (1979), 16–17.

[10] "President Imposes Oil Ban," *The Washington Post*, November 13, 1979, A1.

[11] Ibid., A1, A16.

[12] Executive Order No. 12,170, 3 Code of Federal Regulations (CFR) 457 (1979).

[13] International Emergency Economic Powers Act, 50 U.S. Code 1702 (Supp. III 1979).

[14] U.S. Department of State, Bureau of Public Affairs, "U.S. Measures to Isolate Iran," *Current Policy*, no. 179 (May 8, 1980), 2.

[15] "Iran's Embassy Staff Cut," *The Washington Post*, December 13, 1979, A1.

[16] Executive Order No. 12,205, 3 CFR 248 (1980).

[17] Executive Order No. 12,211, 3 CFR 253 (1980).

[18] Ibid.

[19] U.S. Department of State, "U.S. Measures to Isolate Iran," 2.

[20] "Russia Supports Iran," *The Washington Post*, April 15, 1980, A1. For a contrary interpretation of the importance of this Soviet announcement, see Department of State, *Current Policy*, no. 165, 2, wherein President Carter is quoted as discounting the Soviet promise of assistance to Iran. Carter stated that the Soviet transportation routes were insufficient to offset the impact of a blockade or boycott.

[21] "Russia Supports Iran," A1.

[22] See Richard Lillich, "Forcible Self Help by States to Protect Human Rights," *Iowa Law Review*, vol. 53 (1967), 325, for the argument that neither customary international law nor Article 51 of the Charter prohibits such acts of intervention. Interestingly, the International Court of Justice largely ignored the American rescue attempt of April 1980, finding it irrelevant to the determination of whether Iran's conduct in seizing the diplomatic hostages and entering the diplomatic premises violated international law. *United States v. Iran*, International Court of Justice (1980), 40–41.

[23] See U.S. Department of State, Bureau of Public Affairs, "President Carter, Secretary Brown: Hostage Rescue Attempt in Iran," *Current Policy*, no. 170 (April 25, 1980), 2–4, for a full explanation of the purpose and plan of the rescue mission, including the thinking that went into the decision to abort.

[24] Ibid., 3. Secretary of Defense Harold Brown later claimed that it had been predetermined that fewer than six RH–53 helicopters would make the mission impossible.

[25] Ibid.

[26] Vienna Convention on Diplomatic Relations of 1961, 500 United Nations Treaty Series 95. Article 29 of the convention provides: "The person of a diplomatic agent shall be inviolable. He shall not be liable to any form of arrest or detention. The receiving state shall treat him with due respect and shall take all appropriate steps to prevent any attack on his person, freedom or dignity."

[27] See Eileen Denza, *Diplomatic Law: Commentary on the Vienna Convention on Diplomatic Relations* (Dobbs Ferry, NY: Oceana, 1976), 135.

[28] Order of December 15, 1979, 19.

[29] *Dames & Moore v. Regan*, 453 U.S. 654 (1981).

[30] *The Washington Star*, January 29, 1981, A12.

[31] National Security Decision Directive 138, April 3, 1984.

[32] Quoted in "Preemptive Anti-Terrorism Raids Allowed," *The Washington Post*, April 16, 1984, A19.

[33] Robert C. McFarlane, "Terrorism and the Future of Free Society," speech at the National Strategic Information Center, Defense Strategy Forum, Washington, DC, March 25, 1985.

[34] George P. Shultz, "Terrorism and the Modern World," speech at Park Avenue Synagogue, New York, NY, October 25, 1984, 23.

[35] Hugh Tovar, "Low Intensity Conflict: Active Responses in an Open Society," paper prepared for the Conference on Terrorism and Other "Low Intensity" Operations: International Linkages, Fletcher School of Law and Diplomacy, Tufts University, Medford, MA, April 1985, 24.

[36] See Norman Kempster, "Cables Cited as Proof of Libyan Terror Role," *Los Angeles Times*, April 15, 1986, 5.

[37] Mark Whitaker, "Targeting a Mad Dog," *Newsweek*, April 21, 1986, 25.

[38] "Transcript of Address by Reagan on Libya," *The New York Times,* April 15, 1986, A10.

[39] "Libyans Accused of Worldwide Plots," *The New York Times*, April 15, 1986, A11.

[40] Ibid.

[41] See Richard Bernstein, "European Community Agrees on Libya Curbs," *The New York Times*, April 22, 1986, A8.

[42] Executive Order No. 13010, 61 Federal Register 37347.

[43] McFarlane.

[44] Presidential Decision Directive 63, *Critical Infrastructure Protection*, May 22, 1998. See W. Gary Sharp, Sr., *Cyberspace and the Use of Force* (Falls Church, VA: Aegis, 1999), 201–204, for a comprehensive review of the major elements of this directive and the requirements imposed on the various departments of government and the private sector under it.

[45] George W. Bush, *The National Security Strategy of the United States of America* (Washington, DC: The White House, March 2006).

[46] George W. Bush, *The National Security Strategy of the United States of America* (Washington, DC: The White House, February 2002).

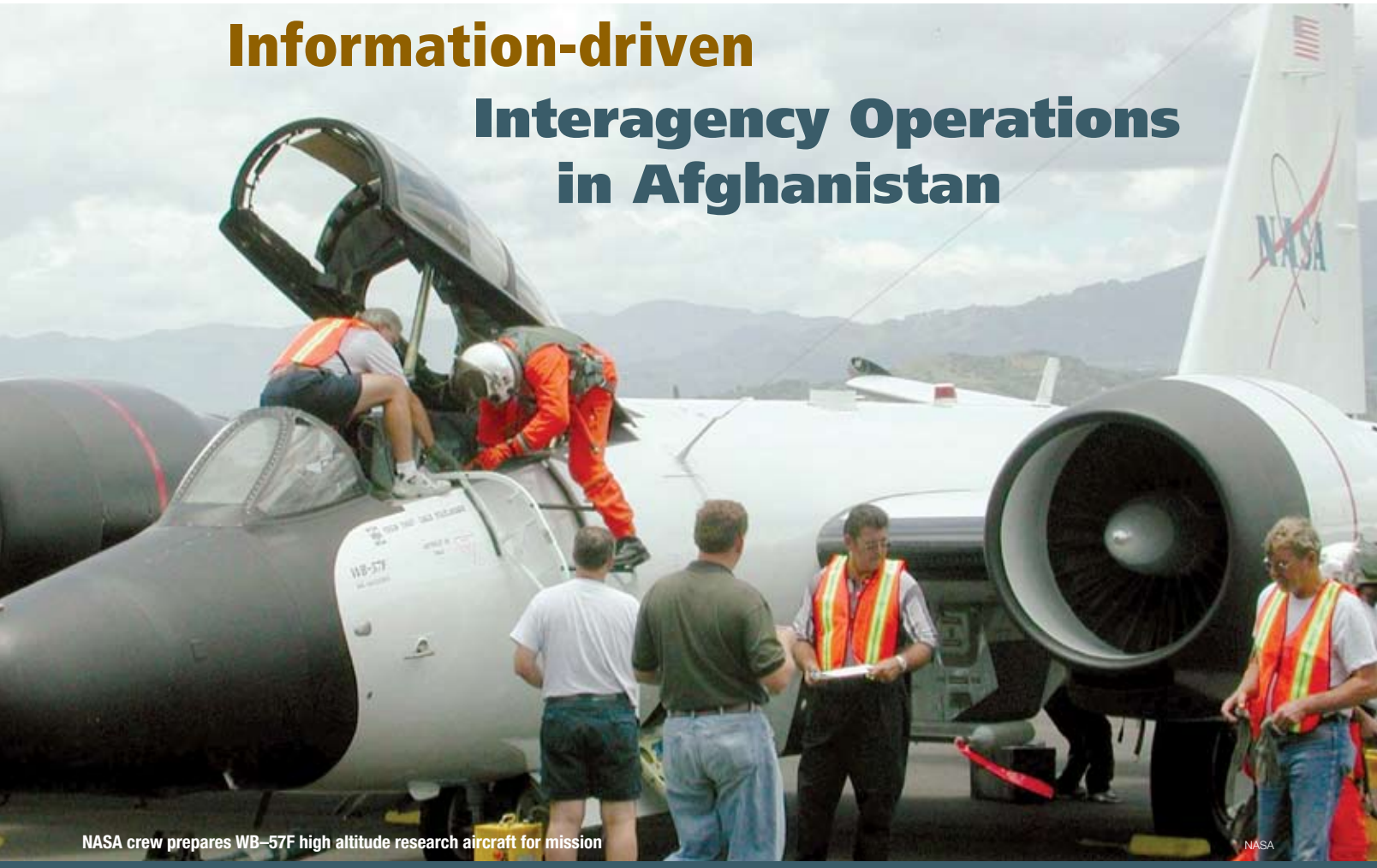
[47] Peter Baker, "Bush to Restate Terror Strategy: 2002 Doctrine of Preemptive War to be Reaffirmed," *The Washington Post*, March 16, 2006, A1.

[48] *National Security Strategy* (2006), 12.

[49] Ibid., 19.

[50] Ibid., 23.

Information-driven Interagency Operations in Afghanistan



NASA crew prepares WB–57F high altitude research aircraft for mission

NASA

By SHANNON O'HARREN, TRUDE V.V. KING, TUSHAR SUTHAR, *and* KENNETH D. COCKRELL

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At the request of Afghanistan's President Hamid Karzai, a team of civilian, military, and coalition scientists, engineers, and support personnel has been collecting hyperspectral data over Afghanistan for the past 2 years. The team includes scientists from the U.S. Geological Survey (USGS), aircrew and support personnel from the National Aeronautics and Space Administration (NASA) WB–57 program, U.S. military logistics and support personnel, and participants from private sector information technology companies from Australia and the United States. Partially funded by the government of Afghanistan, scientists are using this hyperspectral data to assess the country's natural resources. The data promise to identify new sources of revenue and generate jobs for the people of Afghanistan. Scientists leading the effort believe the data should accelerate the development of infrastructure within the country.

Although the mission—named High Altitude Observatory (HALO) Falcon—did not originate as a U.S. Central Command (USCENTCOM) theater security cooperation initiative, it evolved into a military-supported and mutually beneficial operation as a result of close interagency collaboration.

After securing high-level USGS, Office of the Secretary of Defense (OSD), and NASA support to fulfill the host nation's request, OSD and NASA principals contacted USCENTCOM and its air component, Air Forces Central (AFCENT), in an effort to coordinate support, including aircraft beddown, logistics, and NASA flight operations in an environment heavily populated by military aircraft. During this process, several general officers from USCENTCOM and AFCENT were briefed on the mission and the corresponding request from the government of Afghanistan. While briefing the deputy combined forces air component commander, it became clear that AFCENT was seeking additional opportunities to demonstrate how airpower could support strategic objectives in the region. The USGS-led NASA WB–57 geophysical mapping mission offered just such an opportunity.

USGS is a recognized leader in the field of imaging spectroscopy and thereby served as the lead agency for the operation.

Major Shannon O'Harren, USAFR, is an Intelligence Applications Officer at Headquarters, Air Education and Training Command. Dr. Trude V.V. King is a Research Geophysicist at the U.S. Geological Survey. Tushar Suthar is a Contractor supporting the Office of the Deputy Under Secretary of Defense for Advanced Systems and Concepts. Captain Kenneth D. Cockrell, USNR (Ret.), is Manager of the NASA/Johnson Space Center WB–57 Program.

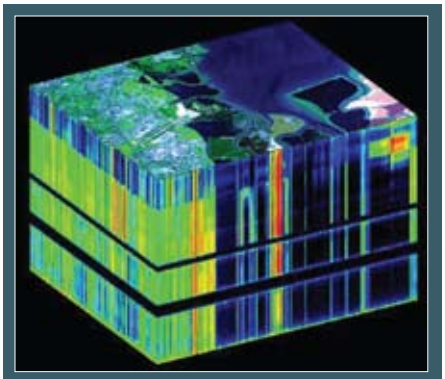


Image highlighting concept of hyperspectral data. Surface spatial data are contained in x-y axes, and compositional information is derived from spectra in z axis.

This expertise is instrumental in acquiring hyperspectral data used in resource (for example, gold, copper, and iron ore) and hazard assessments. In light of the strategic importance of this mission and the lengthy logistic tail necessary to support operations in Afghanistan, the effort was cosponsored by the Department of State and Department of Defense (DOD) and officially led by USGS. Through the cooperation of these departments, and enabled by newly implemented Presidential directives and DOD policies, the team was able to begin initial work in defining its mission and objectives. Through this process, it was determined that NASA aircrew would fly the WB–57 out of Kandahar, Afghanistan, in support of this operation.

USGS Impact

While this article is not about hyperspectral imaging per se, a brief explanation of this USGS capability is contextually important. USGS personnel (principally research geophysicists and accomplished field geologists) bring to bear a wealth of knowledge and experience in tackling complex issues, ranging from geologic hazard analysis (that is, identification of fault lines and flood zones) to chemical residue analysis of contaminated water. This broad expertise has provided insights into many complex challenges confronting the government of Afghanistan, particularly the Ministry of Mining, and Provincial Reconstruction Teams (PRTs) for use in the rebuilding efforts.

PRTs are an effective engagement tool employed by senior U.S. military leaders to work with local Afghans to assist with what are often basic human needs. Across the country, teams are engaged with villagers and tribal leaders to accomplish small yet significant infrastructure projects such as roads, schools, water, and medical facilities. U.S. military personnel, aided by USGS scientists, can use hyperspectral imagery to highlight and assess features in and around a village to determine, for example, soil suitability for crops and construction projects such as small bridges spanning waterways. Hyperspectral data can also aid in determining locations that might be prone to flooding while enabling geologists to anticipate areas that might be at greater risk for catastrophic damage due to earthquakes and landslides. From a financial perspective, hyperspectral data and the information derived from it can potentially translate into billions of dollars for an ailing economy in the form of mining contracts, royalties, and thousands of jobs as new industries are created.

U.S. Geological Survey personnel bring a wealth of knowledge and experience in tackling issues, ranging from geologic hazard analysis to chemical residue analysis of contaminated water

Using advanced technologies and the principles of spectroscopy, USGS scientists are able to characterize the unique chemical makeup of surface geologic features. By analyzing the signature of reflected light from the surface of the Earth, scientists can determine the chemical composition. In other words, hyperspectral data can help determine, for instance, whether imaged surface geologic features are related to processes that may have formed enrichment zones of elements, such as copper, magnesium, iron, or related elements. Such zones may be suitable for mineral exploration and development. This data can also aid scientists in determining healthy or distressed vegetation and can help assess quality in large bodies of water that may contain high levels of pollutants or sediments. Over the last 2 years, nearly 20 terabytes of hyperspectral data have been collected by USGS scientists in Afghanistan.

Government Directives

In December 2005, to assist countries in progressing toward the development of peaceful societies, democratic institutions, and market economies, the President of the United States issued National Security Presidential Directive (NSPD) 44, which outlines management of interagency efforts concerning reconstruction and stabilization. Specifically, the directive seeks to "promote the security of the United States through improved coordination, planning and implementation for reconstruction and stabilization assistance for foreign states and regions at risk of, in, or in transition from conflict or civil strife."[1] The Secretary of State was appointed as lead for coordinating and harmonizing all U.S. Government efforts to prepare, plan for, and conduct stabilization and reconstruction activities. Just prior to the release of NSPD 44, DOD released Directive 3000.05, "Military Support for Stability, Security, Transition and Reconstruction Operations." According to this directive, "stability operations are a core U.S. military mission that the Department of Defense shall be prepared to conduct and support." The directive also states that stability operations "shall be given priority comparable to combat operations and be explicitly addressed and integrated across all DOD activities."[2]

Stability operations are "military or civilian activities conducted across the spectrum from peace to conflict to establish or maintain order in States and regions."[3] Section 4.3.2 of the directive outlines one such activity that underscores the economic focus of the USGS-led data collection activities. As it applies to HALO Falcon, the directive states that DOD policy is to "revive or build the private sector, including encouraging citizen-driven bottom-up economic activity and constructing necessary infrastructure."[4] To reaffirm its partnership with the United States in its efforts to assist them, the government of Afghanistan contributed nearly US$9 million to help finance HALO Falcon data collection efforts.

Interagency Cooperation

Miemie Winn Byrd states that:

the U.S. military alone does not have the skills or resources to create sustainable socioeconomic development. This type of

operation requires an extensive network of stakeholders: the host-nation government (including the military), local populace, international organizations, nongovernmental organizations, private sector, academia, and the U.S. Government (including the military). To attract all the necessary stakeholders, we need to activate the interagency process because the core competency needed for this phase lies in other Federal agencies.[5]

It is this cooperation toward integrated operations that we must support. Similarly, in their article "Forging Provincial Reconstruction Teams," Russel Honoré and David Boslego highlight some insights learned through the implementation of PRTs in Afghanistan. Among them is the lesson that "integrating services and components at the tactical level vastly expands capabilities."[6] They conclude that "seamless integration of all national resources" is a requirement for current and future wars.[7] HALO Falcon is an excellent example of civilian agencies working with the military to enhance diplomatic, informational, and economic relations to aid in stabilization operations.

When American assistance can provide aid to friends and allies around the world who are at risk or have suffered from humanitarian crises, DOD, due to its logistic and security acumen, is often among the first engagement options considered by national leadership. However, as conditions permit, nonmilitary assistance and engagement projects strengthen governmental and institutional relationships for diplomatic, informational, economic, and humanitarian needs. Through theater security cooperation programs, combatant commanders facilitate the integration of many aspects of our national power.

Broader Implications

Whether partnering, collaborating, synchronizing, or harmonizing operations with the military and other U.S. agencies and departments, there is a role for information-driven interagency operations in promoting U.S. national interests. That role should be evaluated by the geographic combatant commands in cooperation with senior staff at our Embassies (that is, economic officers and members of the Country Team), along with members from the Department of State, U.S. Agency for International Development, and USGS, as well as nongovernmental organizations and the private sector. As Franklin Kramer, Larry Wentz, and Stuart Starr suggest in their study *I-Power: The Information Revolution and Stability Operations*, "information and information technologies can significantly increase the likelihood of success in stability operations."[8] Moreover, they go on to explain that successful intervention is incumbent upon "a strategy that coordinates the actions of outside intervenors and focuses on generating effective results for the host nation."[9] The information collected through HALO Falcon represents real power in the form of revenue and growth of new sectors based on the knowledge of previously unknown natural resources. If used effectively, this information can ultimately yield jobs and a higher quality of life for thousands of Afghans.

HALO Falcon is an example of civilian agencies working with the military to enhance diplomatic, informational, and economic relations in stabilization operations

The lessons learned from HALO Falcon serve as a guide for future engagement in countries at risk or in need of U.S. assistance. With a broader understanding of the significance that information plays in today's world, it becomes clear that interagency cooperation across government, coupled with stakeholders from academia and the private sector, can facilitate engagement and potentially economic stimulation of a host nation through stability operations, while simultaneously advancing U.S. national security interests. **JFQ**

NOTES

[1] National Security Presidential Directive 44, *Management of Interagency Efforts Concerning Reconstruction and Stabilization* (Washington, DC: The White House, December 2005).

[2] DOD Directive 3000.05, "Military Support for Stability, Security, Transition and Reconstruction (SSTR) Operations," November 2005.

[3] Ibid.

[4] Ibid.

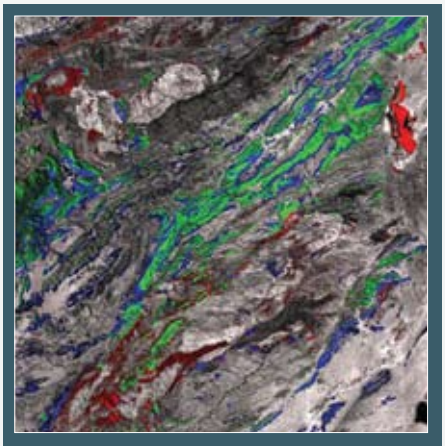
[5] Miemie Winn Byrd, "Combating Terrorism with Socioeconomics," *Joint Force Quarterly* 46 (3d Quarter 2007), 127–130.

[6] Russel L. Honoré and David V. Boslego, "Forging Provincial Reconstruction Teams," *Joint Force Quarterly* 44 (1st Quarter 2007), 85–89.

[7] Ibid.

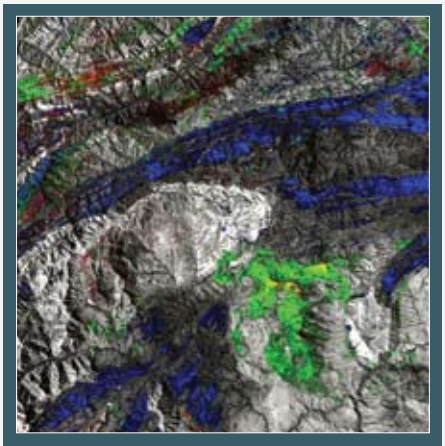
[8] Franklin D. Kramer, Larry Wentz, and Stuart Starr, *I-Power: The Information Revolution and Stability Operations*, Defense Horizons 55 (Washington, DC: National Defense University Press, February 2007).

[9] Ibid.



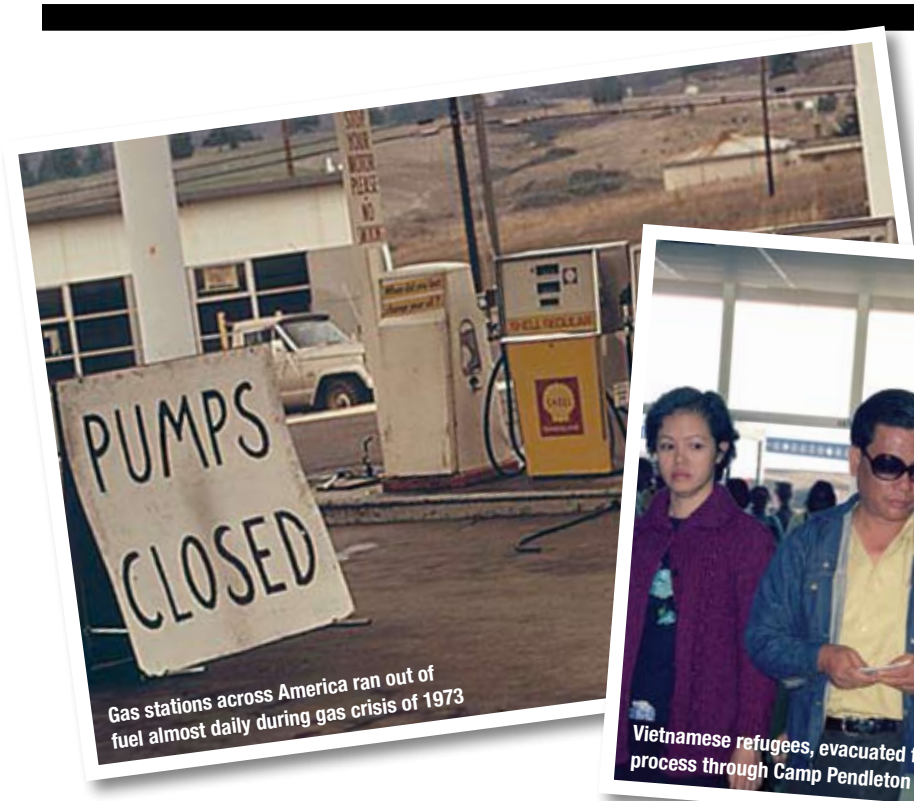
Preliminary Alteration map using 2007 HYMAP Data portions of Block B, Afghanistan

U.S. Geological Survey



Preliminary Alteration map using 2007 HYMAP Data near Khesraw, Afghanistan

U.S. Geological Survey



Gas stations across America ran out of fuel almost daily during gas crisis of 1973

National Archives

Vietnamese refugees, evacuated from Saigon, process through Camp Pendleton after arrival in United States

U.S. Marine Corps (D.E. Campbell)

REVISITING THE SEVENTIES

The Third World Comes of Age

By THOMAS C. REED *and* DANNY B. STILLMAN

During the 1970s, most young American officers were focused on our sad evacuation from Vietnam, the frightening advances in Soviet intercontinental ballistic missile warheads, or the political cannibalism then consuming leaders in Washington. They thus missed the important stories. A quarter century later, it might be well to revisit those years.

Hidden in plain view lay the rise, funding, and technical enablement of certain Third World leaders who now seek nuclear arms and who may soon bring about the detonation of a nuclear device within the West. Such a catastrophe is far more likely today than the Mutual Assured Destruction planned during the Cold War. Where did these people come from, and how complicit were American leaders in their rise?

As the 1960s drew to a close, kings and emirs friendly to the West ruled most of the Middle East. India was thought to be a peaceful and nonaligned—although Soviet-friendly—backwater. A glut of cheap oil was on the market. Producing states and independent drillers had to rely on the major oil companies to refine and market their product using price wars, advertising, glassware, and customer service as enticements. Nuclear weapons were solely the province of the Big Five (China, France, Great Britain, the Soviet Union, and the United States), who were the victors of World War II and were enshrined as the permanent members of the United Nations Security Council. But then the cradles of early civilization began to rock.

Thomas C. Reed was the 11th Secretary of the U.S. Air Force. Danny B. Stillman was the Director of the Los Alamos National Laboratory Technical Intelligence Division.

September 1969: Libya Goes Radical

For the quarter century after the end of World War II, Idris al-Senousi had been in charge of the United Kingdom of Libya. A wartime, Italian-fighting hero, Idris was installed by the British at the end of the war and legitimized by a plebiscite soon thereafter. He ruled his utterly impoverished kingdom with a kindly hand until the discovery of oil in 1955. Then corruption set in. Oil production rose from nothing in 1958 to 3 million barrels per day a decade later. In 1968, the world price of oil was only $3.50 per barrel, but even that gave the ruler of the desert kingdom a daily cash flow of over $10 million—a multibillion dollar annual kitty.[1]

King Idris had no children, and he had done little about planning for his succession. In 1964, at age 74, he had tried to abdicate for reasons of health. His subjects would hear none of it. There was a nephew, Hassan al-Reda, known as "the Black Prince," but his reputation for graft and his lack of gravitas ruled him out as a serious contender for the throne. The family tree stood without solid roots, yet it had produced the low-hanging fruit of newly discovered oil deposits.

In the summer of 1969, at age 79, King Idris headed off to the Turkish spa at Bursa for treatment of a leg ailment. Most other high government officials were also vacationing outside the country. On September 1, with the decks clear, Captain Muammar Qadhafi mounted a coup.

Qadhafi was born in the desert south of Sirte during World War II (in 1942) as Montgomery and Rommel battled for the coast. He grew up in Seha, a village in the southern desert of the Fezzan. As a poor Bedouin boy from the interior, he joined the army at age 17 because there were no other opportunities. He brought with him a resentment of material wealth, foreigners, and infidels.

In 1952, as the British turned over their postwar authority to the newly independent Libyan government, they started to train a constabulary and an officer corps for the infant kingdom. In time, Qadhafi was identified as one of the army's brightest and best. He was sent to the Royal Libyan Military Academy in Benghazi for officer training. Upon graduation in 1965, he was invited to attend Sandhurst, the United Kingdom's military academy, for further training as a military engineer. En route home, in 1968 Qadhafi visited post-Farouk Egypt, picking up a healthy dose of Nasserite Arab nationalism along the way. Upon his return to Libya, Qadhafi and some fellow junior officers began to organize. They called themselves the Free Officers' Association and gave their intended revolution a name: Operation *Jerusalem*.

On September 1, 1969, the 27-year-old Captain Qadhafi and a handful of his fellow officers made their move. Armed with a few revolvers and a mere 48 rounds of ammunition, they closed in on two targets. One was the military headquarters in Tripoli, whose officers already were predisposed to the radical views of the Free Officers' Association. The other was Tripoli's radio station. Qadhafi and his men stormed and took over both. That was all there was to it. No rolling tanks, no action in the streets of Benghazi or Tobruk. Just a gang of young rebels at the radio station in Tripoli and a sympathetic group of duty officers at headquarters; but that was enough. Once on the air, the rebels announced the end of the United Kingdom of Libya, the abolition of all existing government structure, and the birth of the new Libyan Arab Republic.

U.S. Air Force (Jeremy T. Lock)

Colonel Muammar Abu Minyar al-Qadhafi

At first it was not clear who was behind this coup. Qadhafi was the most senior of the plotters, but he was only a captain. The other insurgent officers were junior captains and lieutenants, all in their twenties. To give the coup some credibility (and to protect the key players), one Colonel Bushwerib was first announced as the coup leader. Then, a week later, a government was announced with Mahamoud al-Maghreby as its prime minister. Lurking in the background, however, as the ultimate source of authority, was the Revolutionary Council. Qadhafi was its chairman; the captains and lieutenants constituted the membership.

Due east of Tripoli lay a U.S. Air Force facility known as Wheelus Air Base. It was a North Atlantic Treaty Organization (NATO) training site, a place where pilots based on the foggy and crowded European continent could unfold their wings. Wheelus was a gorgeous place and the site of a Mussolini-era racetrack right on the Mediterranean Sea. The beach and the scuba diving were spectacular. But Wheelus was also secure; it could be reinforced from that same sea. Ten thousand U.S. troops and civilian personnel were stationed there, making it one of the best-defended American air bases in the Near East.

The wing commander at Wheelus during the late summer of 1969 was Colonel Daniel "Chappie" James, an outstanding fighter pilot just returned from 78 combat missions over Vietnam. In later years, when both coauthor Reed and then–General James worked at the Pentagon, James came to tell Reed of the events that took place during that historic night in September 1969.

Colonel James had arrived in Libya only a month before, but he was a quick-witted and sharp officer. On that fateful night of September 1, his operations center at Wheelus picked up the Qadhafi-organized broadcast. A few phone calls around the country revealed the very narrow base of this coup-in-progress. Colonel James knew that Qadhafi's accession and Idris' departure would not be beneficial to Western interests and so advised his superiors in Washington. Colonel James had a well-armed, well-trained, and highly mobile security force on base to protect that NATO facility from insurrections, terrorists, or Soviet-inspired attack; Wheelus was home to

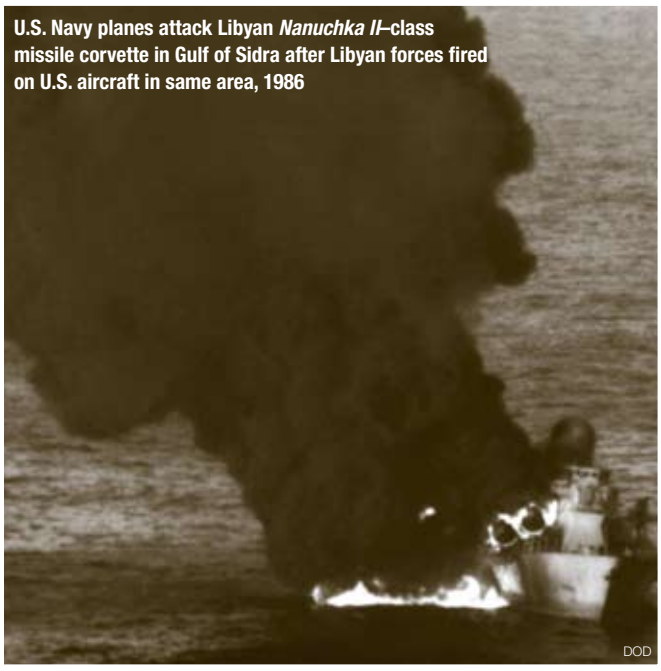
within 5 years of his takeover, Qadhafi engineered the Organization of Petroleum Exporting Countries' embargo of shipments to the United States and its Western allies

some valuable assets. The colonel formulated a plan to send an armed detachment downtown, break into the radio station, arrest the ringleaders, and secure the government facilities as needed. But before acting, he sought the approval of the National Military Command Center in the Pentagon. The officers on duty there referred the matter to the Situation Room in the White House.

Richard Nixon's memoirs make no specific reference to this event, and Henry Kissinger writes in generalities about the precarious military balance in the Middle East during those years, so neither official seems to have given the Qadhafi coup much attention. When queried, Kissinger recalled that he and Nixon wanted to overthrow Qadhafi, but the Foreign Service specialists at the Department of State saw Qadhafi as a "reformer." In all probability, the new Nixon administration simply did not have the confidence needed to deal swiftly with Qadhafi. Taking any action would be "interference in the internal affairs of a sovereign state," Kissinger said later.

Colonel James' troops stayed in their barracks at Wheelus as Qadhafi consolidated his power. By the morning of September 2, he was extending his control throughout Libya. The Black Prince renounced his claim to the throne, calling on Libyans to support the new government. Within a week, the United States recognized the junta as the de facto government, and during that same week, King Idris was told to stay in Turkey. His cabinet fled their homeland, and a campaign of assassination and kidnapping of former officials began. Only the noisy disturbance created by a former prime minister, locked in the trunk of a kidnapper's car, alerted a London policeman to his plight. On December 2, 1969, the Revolutionary Council arrested the Libyan army's chief of staff and the chief of security. A counter-coup was attempted on December 11. It failed. Qadhafi promoted himself to colonel. Then, on January 16, 1970, Qadhafi took off the wraps. He assumed the roles of prime minister and minister of defense.

Within 5 years of his takeover, during Israel's Yom Kippur War in 1973, Qadhafi engineered the Organization of Petroleum Exporting Countries embargo of shipments to the United States and its Western allies.[2] He also pioneered the first "oil shock," raising the price from $3.50 to $13 per barrel and making those increases stick. Within 10 years, Qadhafi was enjoying oil revenues of over $50 million *per day*.[3] Some of those petrodollars made their way into the schools and hospitals of his citizens, but much of Qadhafi's cash went to finance an impressive chemical warfare complex, a plague of terrorist attacks on Americans abroad, and at least two forays into the development of nuclear weapons. The first was undertaken in the early 1980s, a time when China was transferring nuclear weapons technology to Pakistan and when China had contracted, in secret, to build the El Salam nuclear reactor in Algeria.[4] Qadhafi's scientific advisors hoped to travel a similar plutonium route; contractors from Japan and Belgium were to supply the technology, but the project proved indigestible to the limited Libyan scientific infrastructure.



U.S. Navy planes attack Libyan *Nanuchka II*–class missile corvette in Gulf of Sidra after Libyan forces fired on U.S. aircraft in same area, 1986

DOD

During the decade following the oil shocks, Qadhafi's terrorist activities drew a response from the Reagan administration. On April 15, 1986, the President ordered an air attack on Tripoli and Benghazi in response to an earlier Libyan-sponsored assault on La Belle Discotheque, a West Berlin hangout of American Servicemembers. While the April 15 attacks were aimed at Qadhafi, they only succeeded in killing his infant daughter and wounding several others in his family. Some claim Qadhafi "calmed down" after that, but in fact he just became more discreet—and more determined. From disclosures arising after the seizure of the BBC *China* in 2003, it is clear that Qadhafi's second nuclear weapons effort, with roots in Pakistan, was born after the 1986 attacks on Libya.

the newly installed president of Pakistan was conversant with the possibilities of nuclear power—and weapons

Qadhafi became an important force for evil in the Cold War and in the power vacuum that followed, a role made possible by visionary oil men, a negligent king, and a timorous White House that was unwilling to intercede when Western interests were clearly at stake.

December 1971: Fission Comes to Pakistan

At the time of independence in 1947, the British colony of India was partitioned into a central Hindu state (India) and two separated regions with ties to the Muslim religion. The latter parcels, taken together, were to be known as Pakistan. East and West Pakistan were neither contiguous nor compatible, and for years politicians and officers in the West controlled the government. In 1970, however, the consolidated voters in the East won the Pakistani elections. The authorities in the western capital of Islamabad did not care to hand over power.

On March 26, 1971, rebellious army officers in East Pakistan declared independence. Their legitimacy was immediately recognized by Prime Minister Indira Gandhi of India, who was eager to see her Muslim rival dismembered.

With a war of independence in the air, the Cold War superpowers promptly took sides. On August 9, India and the Soviet Union executed a 20-year Treaty of Friendship and Cooperation. As an offset, during that same summer, the Chinese offered material, but not military, support to Pakistan. The Nixon administration, with one eye on its planned rapprochement with China, joined

in supporting its allies in Islamabad, while the government of India, having lost a border war with China[5] a decade before, waited for the winter snows to close the Himalayan passes before deploying active support for the rebels in the East.

In preparing for conflict, the generals in Pakistan noted the lessons of the Six-Day Arab-Israeli War of 1967: preemption pays. On December 3, 1971, the Pakistani air force staged a preemptive raid on the airfields of Northwest India. Those raids were ineffective. The Indian military struck back.

The United States sent a carrier battle-group, led by the USS *Enterprise*, to the Bay of Bengal. The Soviets responded with a trailing naval force, including nuclear-powered submarines, dispatched from Vladivostok. Both forces were on station, armed with nuclear weapons, by the second week of December 1971.

The war itself was a disaster for the overpowered Pakistanis. Within 2 weeks, Pakistan had lost half its navy in battles off the port of Karachi, half its air force in the eastern and western skies, and one-third of its army on the ground in East Pakistan. On December 16, the Pakistani army had no choice but surrender; 93,000 of its troops and camp followers had been taken prisoner. Photographs and videos of Pakistan's Lieutenant General Amir Abdullah Khan Niazi surrendering his forces to gloating Indian Lieutenant General Jagjit Singh Aurora swept the world.

East Pakistan became the independent Republic of Bangladesh. Muslim leaders in Islamabad wept; a young Pakistani scientist in Holland resolved to seek revenge; Brigadier General Yahya Khan, the military president of what remained of Pakistan, resigned. On December 20, 1971, a civilian—Zulfika Ali Bhutto—took control of the government. Bhutto was the leader of the Pakistan People's Party, a prodemocracy organization that was supported by the socialist segments of society while it opposed military rule.

The lessons imposed on the leaders of the new, residual nation were clear: a force equalizer was mandatory. The newly installed president of Pakistan had served as minister of fuel, power, and natural resources. As such, he was conversant with the possibilities of nuclear power—and weapons. Within 3 weeks of his installation, President Bhutto met with his senior scientific advisors to review the nuclear option. The usual ebb and flow of graduate students to universities in the West had begun a decade before. Pakistan's first nuclear power reactor was already under construction in Karachi; it was to go critical by the end of the year. During the months that followed the January 1972 meeting, the president refocused the work of his nation's Atomic Energy Research Council by taking full control, renaming it the Pakistan Atomic Energy Commission (PAEC), and installing nuclear engineer Munir Ahmad Khan as its director.

Khan returned to Amsterdam fully committed to collecting information and parts while Pakistani authorities began to purchase components for a uranium enrichment program

In 1973, demonstrating his belief in democracy—while building his own scaffold[6]—President Bhutto drafted and brought about the ratification of a new constitution. Henceforward, the president was to serve as chief of state; a prime minister was to run the government. Z.A. Bhutto resigned the presidency in August 1973 in order to become the first prime minister of Pakistan; he carried the nuclear portfolio with him. By the time of his removal from power in 1978, Bhutto had assembled a first-class nuclear weapons team. A nuclear power reactor was cranking out plutonium, and knowledgeable scientists were cranking out bomb designs.

June 1972: A.Q. Khan in Holland

In 1936, Abdul Quadeer Khan was born in Bhopal, India, to a Pakistani family. When the British granted independence to the Indian subcontinent in 1947, they used the partition of Hindus (in India) from Muslims (in the split territories of East and West Pakistan) as the fig leaf for their withdrawal. As with any partition, minorities were left behind on both sides. Life was grim for the Muslim Khan family in Bhopal, so at the age of 18, the young Khan migrated to Karachi, in West Pakistan, on foot.

Once there, Khan attended the D.J. Sindh College of Science, graduating in 1960 with a degree in metallurgy. After a brief stint in local government, he decided to pursue graduate studies in Western Europe. He met and married a Dutch girl, spent 4 years at the university in Delft, and emerged with a master's degree in metallurgical engineering. In the process, he became fluent in Dutch and German. In 1968, the young Khan family moved to Leuven in Belgium. Khan entered Catholic University to continue his studies in metallurgy.

Through all those years, Khan's life had been that of the innocuous student and family man, but in 1971 events at home brought a sense of urgency. In the spring of that year, as noted above, the political leaders of East Pakistan rebelled, declared independence from West Pakistan, and adopted the name Bangladesh for their side of the continent. A bloody civil war ensued, with India intervening on the side of the successful rebels. In the aftermath of that war, all loyal Pakistanis (including the 35-year-old Khan) decided they had to "do something" about India.

At home, unbeknownst to Khan, the new government of Ali Bhutto had already decided what to do: go nuclear. There had been rumors of Indian nuclear ambitions for some time. In January 1972, President Bhutto called 70 of his leading scientists to Punjab to discuss this option. His audience was enthusiastic and promised results within 5 years.[7]

Back in Belgium, A.Q. Khan received his doctorate in metallurgy in June, then moved to Holland to take a job with a subcontractor working for the Uranium Enrichment Corporation (URENCO), which was organized by the British, Dutch, and German nuclear power industries to develop the technology needed to separate U–235 fuel from natural uranium compounds. Ultracentrifuges, rotating at very high speeds, were the preferred route. The resulting URENCO technology was the best in the world. In 1972, Dr. A.Q. Khan began collecting—that is, stealing—that know-how with meticulous care.

On May 18, 1974, the Indians tested a nuclear device under the Rajasthani desert. That was the final and defining moment for Khan. The following month, he wrote a letter to President Bhutto (whom he did not know) explaining the role of the centrifuge in producing fissionable material. Khan offered to help with any Pakistani nuclear weapons program. (He did not know one was already under way.) Bhutto responded with interest through his embassy in The Hague.

During the fall of 1974, Khan spent 16 days at the URENCO facility. His day job was to translate documents, but during his spare time, he toured the plant, taking notes on the design and operation of the equipment. His observations were written in his native Urdu to disguise them from prying eyes. In December 1974, President Bhutto and Khan met in Karachi while Khan and his family were home for the holidays. The covert PAEC had already embarked on a plutonium-based nuclear weapons plan, but at their meeting, Bhutto decided to put Khan in charge of a parallel enriched uranium effort.

In the spring of 1975, Khan returned to his post in Amsterdam, now fully committed to collecting information and parts while Pakistani authorities began to purchase components for a uranium enrichment program.[8] A coworker became suspicious and Khan was moved to a less sensitive job. In December 1975, he returned to Pakistan for the holidays, but this time he never returned to URENCO. In the spring of 1976, Khan started work at PAEC. With the full support of the Bhutto government, he was authorized to organize the Engineering Research Laboratory in Kahuta, 15 miles due east of the Islamabad airport. That facility was to develop a uranium enrichment capability for Pakistan. It opened for business on July 31, 1976. Khan stayed in touch with his friends and informants in Holland, and his work may have received additional funding from Libya and Saudi Arabia. During the years that followed, China began the transfer of nuclear weapons technology to Pakistan—presumably to A.Q. Khan—in part as a consequence of the Chinese-Indian border clashes of the previous decade.

In the late 1970s, the American intelligence services learned of all this activity; Central Intelligence Agency surveillance of Khan apparently began in earnest, but in December 1979, the Soviets invaded Afghanistan. The Americans needed all the help they could get from neighboring Pakistan, so hard questions about covert nuclear programs were off the table. By the end of that decade, Khan had an operational enrichment centrifuge online and running at Kahuta as the Americans busied themselves elsewhere.

February 1979: Khomeini in Iran

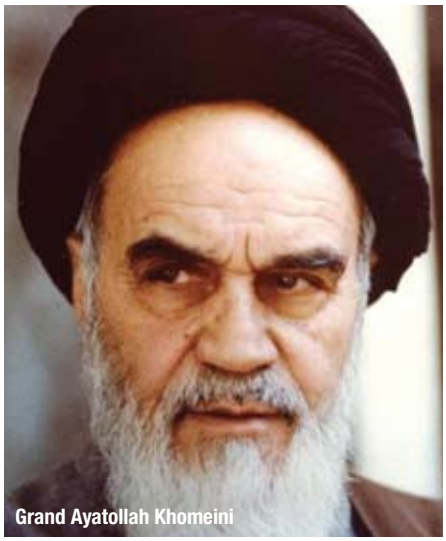
Persia, now known as the Islamic Republic of Iran, is not an Arab nation. Its residents speak Farsi, although Islam is the predominant religion. For much of the 20th century, Iran has been caught in the jaws of history. The Caucasus Mountains and the Soviet Union lie to the north; the old British Empire of India and Transjordan spread to the east and west; and the Persian Gulf bounds Iran on the south. Within the country lay the oilfields that were the prize in the "Great Game" of the early 20th century.

Iran entered that century as an independent monarchy, with its ruler known as the Shah. There was one revolution in 1906 that limited the power of the Shah and established a National Assembly. In 1925, there was another transition wherein Reza Pahlavi seized power (with the concurrence of the National Assembly) and declared himself Shah. In September 1941, 3 months after Adolf Hitler's surprise invasion of Russia, both Britain and the Soviet Union, now allied in the fight against the Nazis, invaded Iran. They deposed the sitting Shah (a Hitler sycophant) and installed his 22-year-old son, Mohammed Reza Pahlavi.

When the war was over, getting the Russians out of Iran was not easy; only a firm stand by President Harry Truman staved off a partition. Then there was the difficulty with Mohammad Mossadeq, the prime minister who in 1951 decided to nationalize Iran's oil industry. At that time, Iran was dependent on foreign markets for the sale of a then-surplus commodity. In 1953, military officers sympathetic to the Shah (and supported by the United States and Britain) removed Mossadeq from power. That move reopened the foreign markets for Iranian crude, which, in turn, brought prosperity to Iran and its leader. But that coup also brought a resentment of Anglo intrusion that persists to this day. For 25 years after the Mossadeq removal, Shah Mohammed Reza Pahlavi ruled as a staunch Western ally.

But Iran is a Muslim country. In 1963, the Shah introduced a package of social and economic reforms, widely hailed in the West but highly offensive to the religious leaders within Iran. The forced Westernization of Iran had begun; those opposed to the Shah's plans would have to go. The Shah imprisoned, and soon thereafter exiled, one of Iran's leading religious activists of that time, 36-year-old Ayatollah Ruhollah Khomeini. Thus the latter's arrival in Iraq.

The Pahlavi-Khomeini relationship had a long history. The Ayatollah's father had been killed by agents of the elder Shah;


Grand Ayatollah Khomeini

Khomeini lost one of his sons, Mustafa, under mysterious circumstances that implicated the younger Shah's regime. Thus, once exiled to Iraq, Khomeini began to plot his revenge. In 1965, his agents assassinated the Shah's prime minister, Hassan Ali Mansur; in the years that followed, the Ayatollah began to articulate his vision of an Islamic Iranian Republic.

In 1971, the British government decided it could no longer support an empire, or even military bases, in the Middle East. As the British moved out, the Nixon administration took over as the Shah's patron. Nixon and Kissinger wanted the Shah, and Iran, to take over the job of policing the Persian Gulf. After the first oil shock in 1973, the United States started selling lots of sophisticated aircraft, missiles, and electronics to the Shah's oil-rich regime. The Soviets were not pleased, so they began to expand their support of the Tudeh (communist) party in Iran. The Tudeh never enjoyed a broad base of support, but in 1971,

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In 1977, Jimmy Carter took office as President of the United States. With him came a new approach to human rights. Those policies may have been morally just, but they proved fatal to the Shah and a blessing to Khomeini. In response to pressures from Washington, the Shah made concessions to his internal critics, which only emboldened them to ask for more. Riots broke out in the city of Qom. The Shah had tried to Westernize a very old culture. Many of its custodians did not approve, and his enlightened postwar leadership had degenerated into a despotic egomania. The Shah had antagonized the ayatollahs and much of the Iranian middle class, and he was dying of cancer.

In 1978, the Carter administration, probably unintentionally, undertook a two-track approach to the future of Iran. William Sullivan, a career Foreign Service officer and by then the U.S. Ambassador to Iran, was the voice of the State Department. He and his backers saw Iran's future in the hands of the clerics. He wished to meet and negotiate with Khomeini, whom he envisioned as a Gandhi-like figure whose accession to power would reflect the values and serve the interests of the United States. At the same time both Carter's national security advisor, Zbigniew Brzezinski, and the Pentagon wanted to rely on the Shah's well-trained military to maintain order. The Brzezinski components of the Carter administration hoped the Iranian armed forces would hold together in order to run the country when and if the Shah left. They saw radical Islam as a serious threat to the West. As 1979 dawned, Ambassador Sullivan was already in Iran conversing with the clerics, while President Carter still thought

Mohammed Reza Pahlavi, Shah of Iran

U.S. Air Force (Denham)

the Shah could be saved and/or that the Shah's generals could succeed him. To facilitate that transition, the White House dispatched four-star Air Force General Robert "Dutch" Huyser to Iran. His instructions were to "convey the President's concern and assurances to the military leaders at this most critical time."

The choice of an Air Force emissary was unfortunate. General Huyser was the most talented of men, but within Iran the Shah's air force was bitterly resented. It was soaking up national treasure in the purchase of exotic aircraft, radars, and control systems that were of little help to the Iranian army. The survival of the Shah's rule would depend on that army taking control of the streets. An Air Force general from the United States, vendor of all those airplanes and other gadgets, would not be able to solidify that army's support.

For an entire month, from his covert arrival in Tehran on January 2, 1979, to his helicopter evacuation at dusk on February 3, Huyser was, as *Pravda* put it, the "American Viceroy in Iran." Upon his arrival, Huyser found a reasonably honest government and a well-trained military ready to carry out its leaders' orders. He encountered an ill Shah—suffering from cancer, dreaming of progress that many of his citizens did not want, and unwilling to order the Imperial Guard to fire on his own people to enforce his visions of a better life.

General Huyser also found an economy paralyzed by work stoppages, organized by the clerics and the Tudeh. Striking customs officials had closed the borders to foodstuffs while admitting a flood of arms for the rebels. He found a banking system operating sporadically and then only to effect domestic transactions, with no settlement of international accounts. He found an oil industry with production cut back to a few hundred thousand barrels a day, with no refined products delivered to the military. And he found streets filled with demonstrators. In Huyser's view, the total support for the clerics and Tudeh never stood at more than 15 to 20 percent of the people; the remaining opposition was held together by their personal dislike of the Shah, his egomania, and his campaign to Westernize their culture. Adding to the chaos, the schools were closed during this crisis. The median age of Iran's citizenry was only 16; there were too many kids on the street with nothing to do.

Huyser inherited a military leadership utterly devoted to and dependent on the Shah yet riven by interservice rivalries. Thus they were incapable of acting on their own. The army chief, resentful of an American Air Force officer usurping the throne, would not use his troops to take over customs; the navy chief would not use his experienced technicians to operate the oilfields and refineries. The air force and the procurement minister were under constant pressure from Washington to execute

Bharat Rakshak News

Commander of Pakistan Army in the East signs Instrument of Surrender ending Indo-Pakistan Liberation War, 1971

DOD (Dennis A. Guyitt)

Former U.S. hostages, freed from Iranian custody, arrive at Rhein-Main Air Base, Germany, on New Year's Day, 1981

sales agreements for weapons systems en route even though the regime was mortally stricken, with only days to live. The chief of the supreme commander's staff (army General Abbas Gharabaghi) was probably reaching an accommodation with the Ayatollah. This is now apparent from that general's freedom of movement in postrevolutionary Tehran and his subsequent comfortable retirement to Paris. The incoherence of the Iranian military chiefs and their inability to organize a coup undoubtedly led to their downfall and eventually to their exile or death.

On Tuesday, January 16, 1979, the Shah left Tehran aboard his 707, headed to Cairo "on vacation." The rejoicing was tremendous, but the pressure seemed to be off. The National Assembly had confirmed a successor government, led by Shaphur Bakhtiar, but that regime would not use its military to break the strikes, which it could have done. Thus the economic paralysis continued, and the military chiefs did not know what to do. For a week after the Shah left, Ayatollah Khomeini held court in Paris, issuing statements and pulling the strings on the demonstrations—now turning to fire bombings—back in Iran.

On Thursday, February 1, the Ayatollah returned to Iran on an Air France jet. Upon landing in Tehran, he declared the Bakhtiar government illegal and announced his intention of replacing it with a true Islamic government. Army troops escorted Khomeini safely from the Mehrabad Airport to downtown Tehran, where they turned him over to his followers. By then, the military was on full alert, ready for a fight. Neither the troops nor their leaders showed any signs of folding, but the safety of any American in Tehran was in question. Most had been evacuated, and on Saturday, February 3, the White House ordered General Huyser to leave as well. In the late afternoon of February 3, as dusk was settling in, the American Viceroy in Iran took off from the Iranian equivalent of the Pentagon. He traveled by helicopter to Mehrabad wearing his bulletproof vest, and from there flew to Stuttgart, Germany.

During the week that followed, Khomeini's standoff hardened, yet the military kept its hands off the power centers of the economy. Then, on Friday evening, February 9, order collapsed. At the Doshan Tappeh Air Force Base, the enlisted troops began to riot. The next day, weapons were stolen from the Imperial Armory, and fires began to break out throughout Tehran. By Sunday, February 11, it was all over: the army chief, General Abdol Ali Badraie, was assassinated outside his own headquarters, perhaps by his own troops. The supreme commander's staff headquarters came under gunfire, with the officers retiring to the command post deep underground. The surviving senior officers were arrested and imprisoned. Deprived of its leadership, the military collapsed and with it the Bakhtiar government.

the Iranian air force and the procurement minister were under constant pressure from Washington to execute sales agreements for weapons systems even though the regime was mortally stricken

In time, the air chief, General Amir Hossein Rabii, was tried and executed by firing squad. The navy chief, Admiral Kamaleddin Habibollahi, escaped from prison, migrated to the Turkish border, and later reached the United States. The vice minister of war, also the procurement chief, was imprisoned, escaped, and also walked to the Turkish border. As 1979 ended, brutal executions ordered by revolutionary councils were widespread, and a new Islamic constitution had been ratified by referendum. The Shah himself died of cancer in Cairo on July 27, 1980.

In General Huyser's view, the mistakes started with an arrogant Shah trying to impose 20th-century industrialization on a medieval society. Then there was the indecisive administration in Washington sending an Ambassador to "work with the opposition, to compel a hundred senior Iranian officials to leave the country," while at the same time telling General Huyser to hold the military together, to support a successor government to the Shah. At the end, it was Bakhtiar's refusal to use the army, the only effective lever he had, that ended

all American hopes. How differently history might have been if the prime minister had made full use of those forces during the closing days of January 1979.[9]

As it was, a grimly anti-American radical Islamic government came to power, again with the assistance of an inattentive American President. And once again, the chaos in the wake of that transition triggered another three-fold increase in the price of oil.

The decade of the 1970s has come and gone. In its wake are strewn the crowns of departed monarchs, glassware from long-closed gas stations, and abandoned trinkets from the cradles of civilization. A river of petrodollars now floods those early empires supporting the whims and ideologies of the new dictators. Many of them have earned the sobriquet "Islamofascist."

As the 1970s ended, the stage was set for the nuclear pandemic to come. Since then, the United States has been marked as "the enemy" in Arab eyes, the once-moribund Chinese giant has revived, and nuclear weapons have been introduced into the Third World. **JFQ**

NOTES

[1] Equivalent to over $20 billion in 2008.

[2] Founded in Baghdad in 1960 to coordinate the producers' oil policies, the Organization of Petroleum Exporting Countries (OPEC) remained an innocuous trade association until the 1973 Arab-Israeli war inspired Islamic radicals to use its pricing and allocation power to dictate economic policy to the industrialized West. In 2008, OPEC accounts for about 40 percent of the world's oil production and about two-thirds of its proven reserves. Neither Russia nor any of the former Soviet republics is a member of OPEC.

[3] Equivalent to a quarter billion dollars per day in 2008.

[4] El Salam was to be a 15 megawatt reactor to be built at Ain Oussera, 170 miles south of Algiers and 600 miles east of Tripoli. El Salam was only discovered by Western intelligence in 1991; it went critical in 1992.

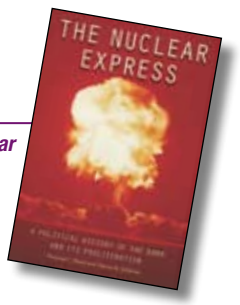
[5] Nixon's surprise trip to China took place 6 months later in February 1972.

[6] Bhutto was executed by his presidential successor, General Zia ul-Haq, in 1979.

[7] In reality it took two decades for Pakistan to achieve nuclear weapons status, and then only with Chinese help.

[8] These purchases began in August 1975. See Shahid-ur-Rehman, *The Long Road to Chagai* (Islamabad: Print Wise Publication, 1999).

[9] Upon his retirement from the U.S. Air Force in the 1980s, Huyser dictated his memoirs of those incredible 30 days at a desk in Reed's office. See Robert E. Huyser, *Mission to Tehran* (Oxford: Andre Deutsche Ltd., 1986).



This article is an abridged chapter from the authors' forthcoming book, *The Nuclear Express: A Political History of the Bomb and Its Proliferation* (Zenith Press).

Off the Shelf

Although North Korea's recent partial declaration of its nuclear activity and destruction of a cooling tower at a nuclear facility in June allowed resumption of the Six-Party Talks, it would be premature to celebrate these actions as a victory for counterproliferation of weapons of mass destruction (WMD). Iran's bold missile tests in July raised tensions in the Middle East as Tehran continued to develop its nuclear capability while calling for the destruction of Israel. The West rightly remains concerned about North Korean and Iranian uranium enrichment activities and suspected sales of nuclear technology to other countries. The proliferation of nuclear and other WMD and the potential terrorist use of such weapons remain ominous threats that the strategy and policy communities must address and the general public should try to understand. The following titles take steps in the right direction to help both audiences.

The Atomic Bazaar:
The Rise of the Nuclear Poor
by William Langewiesche
New York: Farrar, Straus and Giroux, 2007
179 pp. $22.00
ISBN: 978–0–374–10678–2

Anyone associated with the formulation and execution of U.S. national security policy should read *The Atomic Bazaar* to gain insight into the real and potential problems of nuclear proliferation. William Langewiesche wrote this while reporting for *The Atlantic Monthly*, and the book, a loosely confederated group of related articles from that journal, is a quick read that clearly frames today's nuclear proliferation challenges against the backdrop of terrorists and weak states seeking to obtain nuclear material through illicit means.

Noting that there are many people in the world today who, given the required material, could assemble a Hiroshima-type nuclear bomb in their garage (p. 3), Langewiesche devotes the first part of the book to demonstrating the potential ways such individuals could obtain the material required to construct one. He also does a good job of debunking myths and rumors about "loose nukes" and "briefcase nukes" missing from the former Soviet arsenal but unfortunately skews his work with blatant, opinionated criticisms of the G.W. Bush and Clinton administrations' policies. He describes how one could, with enough highly enriched uranium (HEU), set off a significant nuclear explosion simply by dropping one lump of HEU onto another (p. 67). Langewiesche balances these alarming examples by noting that the challenges associated with obtaining and successfully assembling the required material likely explain why such an attack has not yet occurred (p. 69), but he decidedly points out that it is possible. The second part of the book is dedicated to explaining how Pakistan's A.Q. Khan successfully obtained the technology for Pakistan to develop its nuclear arsenal and subsequently set up an illicit international trade in material required to construct nuclear weapons.

Langewiesche concludes that nuclear war between the great powers is far less likely than an exchange of nuclear weapons between or among poor states or nonstate actors that seek to instill terror or to be "respected, feared, or to intimidate" (p. 16)—and there is "nothing like nuking civilians to achieve that effect" (p. 6).

On Nuclear Terrorism
by Michael Levi
Cambridge, MA: Harvard University Press, 2007
224 pp. $24.95
ISBN: 978–0–674–02649

Levi, a senior fellow at the Council on Foreign Relations and an expert on the role of science and technology in U.S. foreign policy, has written an excellent and challenging book on the problem of nuclear terrorism that is being read and debated in all corners of the WMD community. Levi's purpose in writing this book was three-fold: to educate the reader about the science and technology of nuclear weapons, to improve strategies to protect against a terrorist nuclear attack, and to avoid providing any information that could help potential terrorists—a tall order for such a short book. Levi's writing style should appeal to technophobes as well as technophiles since he restricts mathematical and technical notation to footnotes and appendices. Levi describes this book as being "about understanding how to see the big picture of nuclear terrorism, and how to use that understanding to defeat it" (p. 3).

Through a systemic analysis of all aspects of handling nuclear weapons and their associated material ranging from production through delivery, Levi painstakingly constructs a framework that seeks to disrupt a terrorist plot at any of one or more levels. Levi's premise is that defense against nuclear terrorism cannot be aimed at one facet of the problem and, by constructing a multilayered defense strategy, that the United States will increase the probability of intercepting a terrorist plot at least at one point though it may successfully get through others. A discussion of various scenarios for proliferation of nuclear material and weapons to terrorist groups precedes the concluding chapter, which offers several suggestions for the U.S. defense establishment to consider.

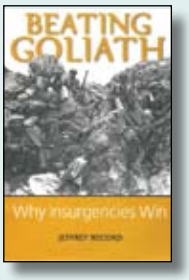
Levi certainly achieves all three of his objectives and continues to receive much acclaim, but the book is a challenging read for the layperson. That said, it is well worth working one's way through it to gain the benefit of a well researched and dispassionate discussion of a critical threat to our national security. Levi's comprehensive solution set may not be considered practical by policymakers as it includes a wide range of costly measures that must be constantly exercised and tested. Finally, after all the careful analysis and explanation, the reader may be dismayed to see the words "luck" and "Murphy's Law" in the final paragraphs. In the closing sentences, Levi equivocates and concludes that "no defense can eliminate nuclear terrorism . . . but the right strategy can tilt the odds in our favor." In the end, this book is a must read for anyone involved in the problem of

protecting our nation from nuclear terrorism.

Other recently published titles recommended for reading:

- Cirincione, Joseph. *Bomb Scare: The History and Future of Nuclear Weapons*. New York: Columbia University Press, 2007. 224 pp. $27.95
- Preston, Thomas. *From Lambs to Lions: Future Security Relationships in a World of Biological and Nuclear Weapons*. Lanham, MD: Rowman & Littlefield, 2007. 448 pp. $95.00
- Venter, Al J. *Allah's Bomb: The Islamic Quest for Nuclear Weapons*. Guilford, CT: Lyons, 2007. 336 pp. $24.95 (Hardcover)

—R.E. Henstrand



Beating Goliath: Why Insurgencies Win
by Jeffrey Record
Washington, DC: Potomac Books, 2007
192 pp. $24.95
ISBN–13: 978–1–59797–090–7

Reviewed by
DAVID J. LYLE

A useful critique of *Beating Goliath: Why Insurgencies Win* might best start by describing what the book is *not*. At 144 pages of text, it is *not* an exhaustive treatment of the history and theories of counterinsurgency (COIN). It does *not* argue, as some reviewers have suggested, that Davids usually defeat Goliaths. It does *not* suggest that the United States should forgo its conventional strength to concentrate on counterinsurgency. *Beating Goliath* is a concise, insightful, and thoroughly researched work that uses historical case studies to propose that there are certain conditions that, in the right combinations, can dramatically enhance the chances for the weak to overcome the strong in war. Record demonstrates that an understanding of these aspects, whether from the perspective of David or Goliath, will dispel any misconception that a mighty giant can fall to rock-throwing peasants only if the shot is lucky or if the giant's hands are bound.

Record assumes reader familiarity with the classic theorists of insurgency and irregular warfare but does due diligence to modern COIN theorists. He adopts the arguments of Ivan Arreguin-Toft (superior strategy prevails in asymmetric matchups) and Gil Gerom (democracies are inherently disadvantaged in irregular warfare because their populations reject the methods and timelines required to win), and then adds a third approach for predicting the weaker side's chances for success. Using historical examples—including an outstanding analysis of how an American David won the War of Independence against the British Goliath—Record makes a compelling argument for the importance of outside assistance in successful insurgencies, a factor often marginalized or ignored in most treatments of irregular warfare in favor of ideological and political factors.

Record concludes that "the combination of a stronger political will, a superior strategy, and external assistance can be a potent formula for insurgent success" (p. 67), though not a guarantor of it. He also makes the excellent point, echoing Andrew Mack, that many mistakenly judge a Goliath's relative strength by his total military capability rather than the strength available where the counterinsurgency is being conducted (pp. 9–10). Record's argument is validated in the American Revolution case study and perhaps is best illustrated in modern times by the current North Atlantic Treaty Organization experience in Afghanistan.

Thus, Record presents, in converse, three criteria by which the stronger side's planners should be able to win—a combination of strategy, local staying power, and ability to isolate the insurgents—and avoids the mostly irrelevant comparisons of total economic power, superior numbers, and overall military strength typically used to judge Goliath's chances for success. His subsequent application of these criteria to the U.S. experiences in Vietnam and Iraq (including an insightful comparison of the conflicts) highlights how the American Goliath has not always accounted for these factors in how it organizes, trains, and equips its forces (a point made in John Nagl's *Learning to Eat Soup with a Knife*, which Record cites). He also argues that U.S. planners have traditionally confused military success with political victory during war termination planning, and tend to blame U.S. COIN losses on restrictions and limitations on the application of force—as Record phrases it, "because it was not sufficiently *conventional* in fighting the war" (p. 124). Record echoes Colin Gray in arguing that the United States often mistakenly sees the warfighting and political sides of conflict as separate, sequential actions rather than inseparable aspects of what should be a singular, mutually dependent effort between politicians and the military, a view that is inherently detrimental to successful counterinsurgency.

Record's commentary on the traditional U.S. difficulty with irregular warfare is valid and well documented. While the majority of the book is convincing, it becomes problematic in its conclusion when Record proposes that the United States "should avoid direct military involvement in foreign internal wars" (p. 137) because its political system, culture, and skills are inherently unsuited to the requirements for successful foreign counterinsurgency. This view seemingly fails to account for the fact that the combination of the enemy's "vote" and the corresponding political necessity for action in the face of attacks may not allow U.S. policymakers the luxury of choosing whether to engage in counterinsurgency. This comment is especially curious as it comes after Record's own well-crafted argument that the Weinberger Doctrine incorrectly divorced politics from war, creating "a recipe for military inaction" by instituting an "all-or-nothing approach" (p. 127) that resulted in the U.S. neglect of counterinsurgency after Vietnam. By his own arguments, avoiding military participation in COIN altogether would be a similar form of "absolutism" that does not recognize the Clausewitzian admonition that force is an arm of diplomacy, not something merely "to be used only when diplomacy failed" (p. 127).

Additionally, this "pre-surge" view assumes that the United States cannot adapt to the challenges of irregular warfare, discounts examples of successful U.S. military limited involvement in COIN (such as the effort in El Salvador from 1980–1992), and fails to consider the possibility that even imperfectly executed COIN operations may have a positive strategic effect in the long run. While Record is indeed realistic, only time will tell if he is overly pessimistic.

Beating Goliath is a significant addition to the irregular warfare discussion that concisely summarizes the challenges of waging counterinsurgency and asymmetric warfare. Record provides a useful intellectual construct for the development of "strong against weak" (or vice versa) strategies. His most useful contribution is to remind us that military success can be, as a North Vietnamese officer famously stated, "irrelevant" to achieving victory. Unless sound counterinsurgency strategies combining military and political elements are chosen and specifically designed to simultaneously maintain

domestic support (both in the partner nation and at home) and isolate the insurgent from the same, Goliath will be on shaky ground before the first stone is slung. Using Record's criteria for analysis, future U.S. planners are less likely to commit their traditional "Goliath" mistake in warfare—as Fred Charles Ikle described it in *Every War Must End*, "choosing a plan without an ending." **JFQ**

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Beyond Preemption: Force and Legitimacy in a Changing World
Edited by Ivo H. Daalder
Washington, DC: Brookings, 2007
190 pp. $19.95
ISBN–13: 978–0–8157–1685–3

Reviewed by
MATTHEW J. MORGAN

Beyond Preemption provides a timely assessment of changing understandings of the use of force through a cross-national sample of politicians, strategists, diplomats, and international lawyers that the Brookings Institution conducted over 3 years. The book focuses on the impact of the Iraq War on the dynamics of the international community and on the ability to mobilize collective action in the future.

The contributors share the opinion that collective action in places such as Darfur, where the international community seems embarrassingly ineffective, has become more difficult because of Iraq. This argument seems to ignore earlier examples such as Kosovo or Rwanda, where United Nations (UN) Security Council authorization to prevent ethnic fighting was equally elusive. Even during the early days of the United Nations, its authorization for force after North Korea's invasion of the South occurred only because the Soviet boycott of the Security Council prevented a Soviet veto. Iraq hardly seems to change the dynamics of a collective body riven by the divergent national interests of its great power members.

Beyond Preemption, however, views the Iraq war as a significant paradigm shift that has altered the dynamics of international opinion on the use of force. The contributing authors discuss the use of force respectively to prevent the proliferation and use of weapons of mass destruction (WMD), to fight terrorism, and to conduct humanitarian intervention. Changing notions of state sovereignty norms are addressed in all of these chapters. A summary chapter, "What the World Thinks," covers these themes as well as sharing the outcome of the Brookings cross-national survey. Finally, appendices include two recent landmark U.S. National Security Strategies and three UN reports such as *The Responsibility to Protect*. Absent is any biographical information on chapter authors that would be expected in an edited volume, only a list of their names and institutional affiliations.

In the foreword, scholar and diplomat Strobe Talbott makes several unsupported assertions that made this reviewer question where the book would lead. In two sentences, Talbott argues that American intervention in Afghanistan has been unsuccessful because of a diversion of attention to Iraq and that Iraq has been unsuccessful because of its illegitimacy in world opinion. While both of these arguments are plausible, they are rather controversial to make without further development. Setbacks in both Afghanistan and Iraq could be due to the committed and canny Islamist insurgencies in those countries, the monumental size of the task that could not be accomplished even with more attention or allied support, or flawed execution (which the author mentions but dismisses as not the primary factor).

Talbott claims a few paragraphs later that "since 1945, most states have generally lived up to these rules"—"these rules" being the UN Charter's prohibition of "the use of force in interstate relations [that] recognizes only two exceptions . . . defend[ing] themselves and . . . authorization of the UN Security Council." A historical review may not suggest that there has been such minimal use of interstate force since 1945. Examples that come readily to mind include Afghanistan in the 1980s, Korea, Vietnam, the Falklands, Israel, Kashmir, and numerous small-scale wars in the developing world.

An introduction by editor Ivo Daalder sets up the book and provides a coherent case against the preemption doctrine articulated by the Bush administration after September 11. James Steinberg then addresses the difficult problem of using force to combat the spread of weapons of mass destruction. He is sympathetic to the need for force, even preemptive force, to prevent the destabilizing and risky consequences of the spread of WMD, but he also recognizes the difficulties of its use for this purpose.

Bruce Jentleson's chapter on the use of force against terrorism provides a more skeptical assessment of both the legitimacy and efficacy of using force. He also raises the issue of international opinion, citing in particular countries that might find themselves the site of counterterrorist intervention (such as Sudan, Iran, and Libya) as highly critical of both its efficacy and legitimacy.

Susan Rice and Andrew Loomis discuss the tensions between sovereignty and intervention and the evolution of this dynamic throughout the 1990s. Much of their chapter is a review of ideas circulated in the scholarly field in the early part of this decade. However, they include discussion on Iraq and Darfur in particular and conclude with an impassioned call for international involvement in Darfur.

The final chapter, by Anne Kramer, provides an overview of the various concepts discussed in the book with a focus on how respondents to the Brookings survey reacted. This chapter is the least compelling of the main chapters of the book for two reasons. First, references to the respondents seemed inconsistent, sometimes using terminology such as "Russians and Middle Eastern participants expressed" (p. 129) and other times "India, Pakistan, and Israel agreed" (p. 111). The latter characterization is problematic because the survey of these midlevel functionaries could not really merit the metonymy used to suggest a state position. (This could be a merely stylistic issue.)

The second concern presents a more fundamental difficulty. The chapter meandered and was hard to follow. It was difficult to determine the author's goal, and only after 36 pages did she present the framework synthesizing her findings. The chapter would have been much more cogent and readable had this framework been introduced at its outset.

Altogether, *Beyond Preemption* was an interesting read that provides a timely assessment of an important topic. As the United States is preparing for a new administration, this contribution to the literature in international relations will help inform scholars and policymakers as new ideas are developed to deal with the difficult realities that confront the world in Iraq and beyond. **JFQ**

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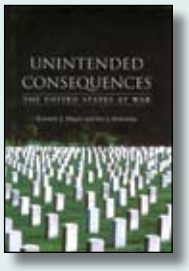


Unintended Consequences: The United States at War
by Kenneth J. Hagan and Ian J. Bickerton
London: Reaktion Books, 2007
224 pp. $29.95
ISBN–13: 978–186189–310–9

Reviewed by
CARL L. REED II

War is folly, war is futile—at least that is what historians Kenneth Hagan and Ian Bickerton conclude in this intentionally provocative version of history. They argue that the major wars fought by the United States always result in malignant "unintended consequences" on an order of magnitude far greater than the intended outcomes, or even the positive unintended outcomes, of war. Unfortunately, the authors' decision to disregard any positive aftermath of war has produced a book that is far too simplistic in its approach and transparently agenda-driven in its conclusions.

The authors limit their definition of unintended consequences to "those events that could only have occurred as the result of war: that is, without the war the events would not have occurred" and exclude events in which war is merely a precondition or "unwanted events that it was known would occur as the result of war (for example, casualties)" (p. 10). Moreover, they ignore any positive results of war and deliberately focus their essay on the undesirable unintended outcomes of war, which, in their opinion, "are most quickly overlooked and forgotten in the retelling of America's wars and in describing the lessons allegedly learned from past wars" (p. 12).

Hagan and Bickerton conclude that Carl von Clausewitz's maxim that "war is the continuation of policy by other means" is invalid and therefore not a useful guideline for policymakers. On examination of the wars in which the United States has been involved, the authors decide war is not a continuation of existing policy at all; rather, war historically either results in a fundamental transformation of existing policy or creates entirely new policy. In this regard, Hagan and Bickerton surmise that the ongoing war in Iraq, and the U.S. inability to achieve its policy objectives there, is merely following historical precedent in producing a variety of malignant "unintended consequences." In their view, "[g]oing to war did not solve problems, it [merely] created new ones" (p. 188).

The authors limit their analysis to the 11 major wars the United States has been involved in: the War for Independence, War of 1812, war against Mexico, Civil War, Spanish-American War, World War I, World War II, Korean War, Vietnam War, and the two wars against Iraq. To structure their analysis, they methodically examine each war and the reasons that the Presidents gave to Congress for embarking on them and then compare the circumstances ending the conflicts to determine the extent to which the stated objectives were achieved. The authors persuasively argue that the outcomes of these major wars were vastly different from the stated objectives at their outset.

However, Hagan and Bickerton confound the outcome variances as necessarily tainted despite anecdotal evidence to the contrary. For instance, they point out that American independence was not an initial objective of the colonists in the War for Independence. Likewise, at the conclusion of the War of 1812, the Treaty of Ghent failed to address President James Madison's objectives that the British cease the practices of naval blockades and impressment against the United States and its citizens. After the war, however, the British never again used these practices against the United States. Moreover, the emancipation of slaves and the eventual 13th, 14th, and 15th amendments to the Constitution were also "unintended consequences" of the Civil War. The authors' implication that these outcomes are inferior because they varied from the stated objectives of war is unquestionably faulty.

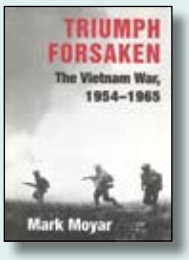
Hagan and Bickerton do their best work setting the stage for each of the major U.S. wars by meticulously referencing the publicly stated objectives of each war and then tracing the transformation, or complete change, of those objectives throughout the conduct of the war. Each chapter is usefully partitioned to discuss the event leading up to the war, its conduct, and ultimately its "unintended consequences."

As historians, the authors are quite deliberate and provide a convincing set of facts for the reader to consume. Unfortunately, they fail to present their argument objectively and tend to contort facts to satisfy a political and social agenda. For example, they cite the Spanish-American War as the conflict most closely resembling the current war in Iraq because both involve regime change and mass cruelty to citizens. As a result, Hagan and Bickerton gratuitously discuss the lease agreement the United States has with Cuba and state that "[m]ore than one hundred years after signing the lease, as part of the 'Global War on Terrorism', the United States set up an internment camp at Guantanamo that made the Spanish look like amateurs in the practices of cruelty and barbarity" (pp. 100–101). Multiple unsubstantiated comments of this type infiltrate each chapter of the book.

Disappointingly, Hagan and Bickerton conclude the book with a diatribe: war is obsolescent, the Bush administration is run by religious fanatics, the rule of law is currently ignored, and the United States needs to submit to the International Criminal Court and the United Nations. Moreover, they discuss how without war, the United States could focus on conserving energy, fighting global warming, and promoting education. The authors' fervor in making these arguments tremendously undermines their credibility as experts in the field.

Setting aside the political and social agenda, *Unintended Consequences* is a must-read for senior leadership and policymakers. This quick read underscores the importance of clear policy objectives and goals at the outset of war. Additionally, it buttresses the importance of branches and sequels to a campaign. The utility of this book is to equip the reader with an awareness of unintended consequences of war, and the authors competently succeed in that regard. Whether war is folly or war is futile is left for the reader to decide. **JFQ**

Lieutenant Colonel Carl L. Reed II, USAFR, is a Reserve Military Judge and an attorney in private practice.



Triumph Forsaken:
The Vietnam War, 1954–1965
by Mark Moyar
Cambridge: Cambridge
University Press, 2006
512 pp. $32.00
ISBN: 0–521–86911–0

Reviewed by
LEWIS SORLEY

"Ripeness is all," wrote Shakespeare. Mark Moyar has demonstrated the enduring truth of this observation by publishing, at the exact moment when U.S. policy in Iraq was undergoing intensive and very public review and reevaluation, a brilliant analysis, amounting to a cautionary tale of American policy during the early years of the war in Vietnam. This account not only extends and corrects our understanding of Vietnam in many dimensions but also provides multiple useful insights applicable to similar foreign involvements, actual or contemplated.

Moyar, a young stalwart in the forefront of the revisionist legions, set out about 7 years ago to produce a one-volume treatment of the Vietnam War. So productive was his research, however, that he was obliged to publish the results on the early years in this volume, with the remainder to follow in a forthcoming volume. His impressive work introduces an authoritative new voice into what is left of the debate about the nature, conduct, responsibility for, and outcome of the Vietnam War. His views, and their unassailable base, will have to be taken into account in future works on the topic.

Moyar acknowledges at the outset the academic battles that for years have mirrored the military battles of the war itself. The bulk of the literature comes from "the orthodox school, which generally sees America's involvement in the war as wrongheaded and unjust. The revisionist school, which sees the war as a noble but improperly executed enterprise, has published much less, primarily because it has few adherents in the academic world" (p. xi). For those whose knowledge of the Vietnam War derives primarily from secondary sources and what has come to be accepted as the orthodox view, Moyar's assessment of what might have been will come as a great surprise. But his thoroughgoing scholarship demands attention and respect. His catalogue of American officialdom's misjudgments and misconduct in the early years is itself enough to commend this work as required reading.

Moyar's central thesis is that great progress was made in South Vietnam's conduct of the war under Ngo Dinh Diem and that, had not certain Americans colluded in pulling Diem down, the war could have been satisfactorily resolved and—it is implied—without the introduction of large numbers of U.S. ground forces and extensive losses on both sides, and with an outcome favorable to the allied coalition rather than to the communists. Although it is impossible to know whether the Diem regime, supported rather than undermined by its sometime ally, could have sustained itself and fashioned an enduring counter to communist aggression, Moyar offers much evidence worthy of consideration.

Diem was a man of extraordinary ability, determination, and probity. This was widely known, and appreciated, during his initial years in office. Ambassador J. Lawton Collins reported that "Diem's integrity, strong nationalism, tenacity, and spiritual qualities render him the best available Prime Minister to lead Vietnam in its struggle against Communism" (p. 45). Diem took control of the army, subdued dissident sects and criminal warlords, and countered the communists. He promoted economic gains, education, and health care. He brought genuine land reform to the Mekong Delta. He governed authoritatively but austerely and with integrity. Without Diem, there would have been no independent or viable South Vietnam.

Journalist David Halberstam decided otherwise and set out to bring Diem down. In a campaign played out primarily in the pages of the *New York Times*, Halberstam systematically disparaged Diem and his government, then later misrepresented his own reportorial record. Moyar has painstakingly analyzed Halberstam's dispatches and compared them with his later books, finding that Halberstam claimed in 1972 to have opposed the war as early as 1963 when in fact he strongly supported it in 1965. Halberstam and others "presented grossly inaccurate information on the Buddhist protest movement and South Vietnamese politics, much of which they unwittingly received from secret Communist agents" (p. xvi). Then, having helped to bring down Diem, Halberstam and other journalists "disparaged Diem with falsehoods so as to claim that South Vietnam was already weak beyond hope before the coup" (p. xvii). Of Halberstam's stint in Saigon, Moyar concludes, "Before he left . . . he would do more harm to the interests of the United States than any other journalist in American history."

Eventually, a small group of American officials concluded that Diem had to go and conspired to facilitate his ouster. Moyar writes, "Twice in Vietnam the Americans would forsake the successes that they had attained at a heavy cost in men and dollars. The first took place on November 1, 1963" (p. 287), the day Diem was murdered. Those who saw bringing down Diem as in America's interests had apparently given little thought to who might succeed him and, presumably, do better. As a consequence, a series of inept, self-serving, and disputatious "leaders" followed over the next several years. In Moyar's view, "Supporting the coup of November 1963 was by far the worst American mistake of the Vietnam War" (p. xvii).

Lyndon Johnson inherited a war that he neither wanted nor had much stomach for. His lack of candor in dealing with the American people would "prove a disastrous error in the long run, for the people ultimately were to recognize his deceitfulness and his failure to inspire the people for war" (p. 355). Johnson had some stupendously inept advisors, chief among them Robert McNamara and General Earle Wheeler, but the errors in such a scheme of deception were entirely his own.

Another important theme running through Moyar's account is the lack of facts on the state and progress of the war. Johnson did not level with the public about his plans for deployment of U.S. troops. The press neither told the public much about the true nature of communist aggression in South Vietnam, nor presented a fair and balanced picture of South Vietnam's own government and its conduct of the war. Many in our own government, to include the Congress, knew little about the nature of the war or its progress. Among the many deficiencies of successive administrations in Washington, the persistent failure to mount an effective counter to monopolization of the debate by antiwar elements was one of the most disabling.

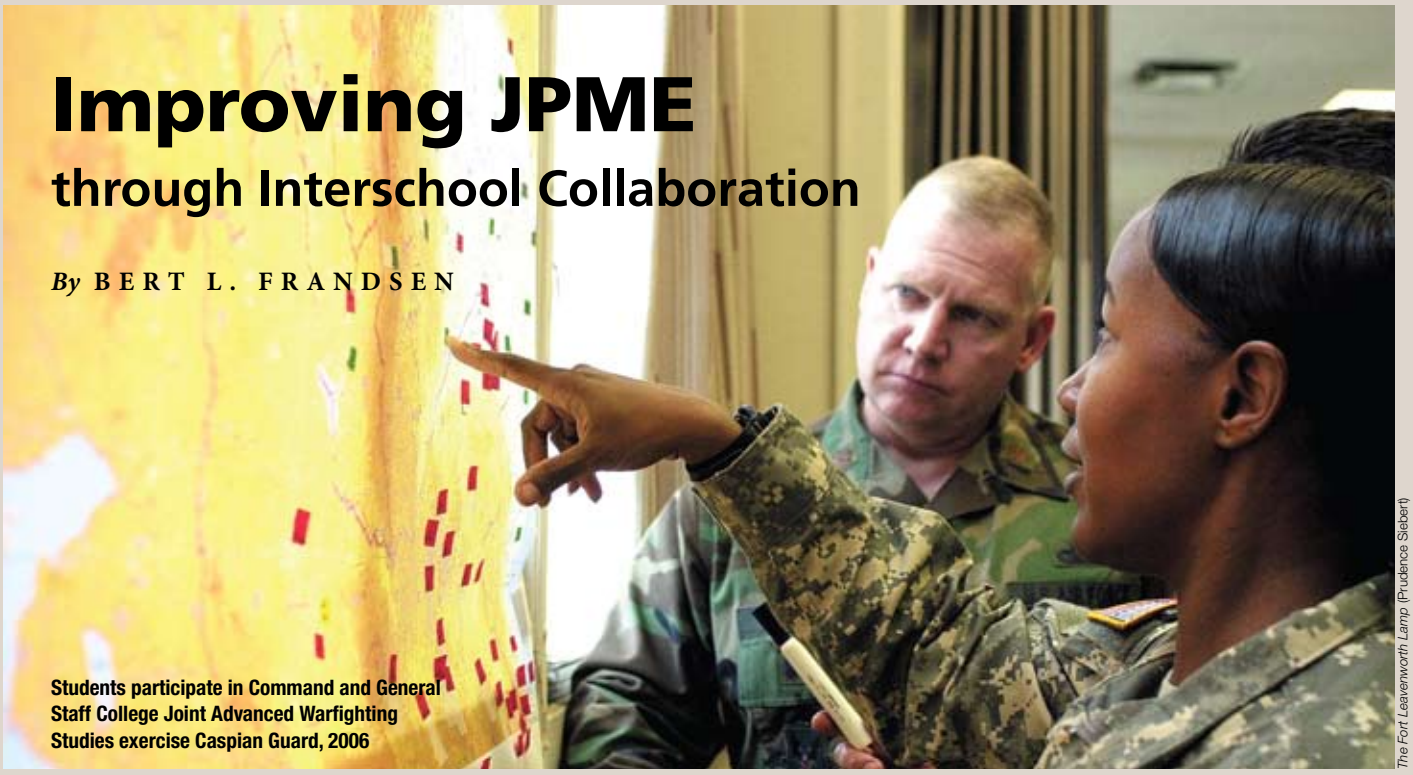
Misperceptions of the war extended to the White House itself. President Johnson's approach to conduct of the war, shaped as it was by "misplaced fears and faulty intelligence and unwarranted confidence in brainy civilians, forfeited opportunities to deny the Communists the great strategic advantages that they were to enjoy for the next ten years" (p. 416).

Ultimately, Johnson acquiesced to repeated requests for more troops from his field commander, General William C. Westmoreland, resulting in well over a half-million American troops on the ground at the high water mark. How that played out under Johnson and then, as those same forces were progressively withdrawn, under his successor Richard Nixon will be the subject of Moyar's next book. It promises to be every bit as fascinating and instructive as this work. **JFQ**

Lewis Sorley is the author of *A Better War: The Unexamined Victories and Final Tragedy of America's Last Years in Vietnam.*

Improving JPME
through Interschool Collaboration

By BERT L. FRANDSEN



Students participate in Command and General Staff College Joint Advanced Warfighting Studies exercise Caspian Guard, 2006

The Fort Leavenworth Lamp (Prudence Siebert)

The degree of interaction among the intermediate colleges might be compared to that between the Services before the Goldwater-Nichols Department of Defense Reorganization Act. Each college is so busy meeting its own requirements that meaningful collaboration with its sister Service schools is almost too hard to attempt.

To be fair, the biggest challenge for curriculum designers is not filling the academic calendar. Each college must satisfy a variety of outside authorities who provide guidance and levy educational taskings. Indeed, fitting all of these requirements into the educational program, some of them changing from year to year, can be frustrating to say the least. Understandably, a high degree of resistance exists to outside initiatives.

More to the point, even though each intermediate institution has a joint exercise program, it has proven impossible to link them in a truly joint exercise. Instead, the colleges' usual practice is to simulate the other Service components, sometimes tasking the small number of sister Service students assigned to the institution to portray their parent Service. This approach is problematic; while these sister Service students may indeed be tactically and technically competent in their own Services, few have received the in-depth schooling relevant to the operational level of war that is part of the intermediate education experience. Nor have they had the advantage of the comprehensive midcareer Service indoctrination that occurs at the command and staff colleges.

In spite of such obstacles, the Army Command and General Staff College (CGSC) and the Air Command and Staff College (ACSC) are attempting to introduce a new level of joint collaboration. In March 2008, the schools teamed up to conduct a third annual joint planning exercise, commonly referred to as the Intermediate Level Education Joint Exercise. Such collaborative events represent a significant step forward for joint professional military education.

This joint exercise program, however, was started on the initiative of each school's senior leadership. As we all know, the long-term viability of such internal initiatives, no matter how enlightened, is at risk as personalities and conditions change. Indeed, such initiatives usually give way to higher priority requirements when resource constraints tighten. Consequently, it has been difficult to expand this exercise beyond a relatively small percentage of students at each institution, and it has proven impossible to expand the exercise to include students at the College of Naval Command and Staff and the Marine Corps Command and Staff College.

This article describes this innovative joint exercise program, explains its benefits, and offers a way ahead. Moreover, it suggests that a joint exercise program at the intermediate Service college level has the potential to improve joint professional intermediate education and thereby improve overall American military effectiveness.

The impetus for collaboration among the intermediate colleges surfaced at a four-star inter-Service training summit hosted at Fort Leavenworth in February 2005. Admiral Edmund Giambastiani, then-commander, U.S. Joint Forces Command (USJFCOM), and the senior training and education officers of each Service attended. Subsequently, the Army Command and General Staff College's Brigadier General Volney Warner invited his fellow commandants to have their schools participate in a joint planning exercise.

It is important to note that General Warner's proposed joint exercise, while valuable in its own right, was to be a vehicle to stimulate further collaboration among the schools. Such collaboration could have many other positive effects as faculty share ideas about their educational mission. After all, the intermediate colleges are all tasked with meeting the same joint professional military education objectives and learning areas. Collaboration among

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professional educators oriented on similar objectives ought to raise the overall quality of joint professional military education.

General Warner succeeded in convincing the commandants of the Army, Navy, and Air command and staff colleges to conduct a one–joint task force (JTF) proof of concept exercise in March 2006. The exercise succeeded and generated commitments from the Army and Air Force colleges for expansion. An expanded three-JTF exercise, involving 150 students from ACSC and 220 from CGSC, was conducted in March 2007. Both schools conducted a similar exercise again in March 2008.

In the 2007 joint exercise, the students formed the planning staffs of three JTFs. Two were headquartered at Fort Leavenworth and one at Maxwell Air Force Base. Each of these JTFs had its full complement of Service component headquarters. CGSC students at Fort Leavenworth formed the land and special operations components for each JTF, while ACSC students at Maxwell formed the air components.

Due to scheduling difficulties, the Navy and Marine Corps staff colleges were not able to participate. Consequently, Navy students assigned to Fort Leavenworth formed a maritime component and response cell for the JTFs headquartered at CGSC. Meanwhile, Air University's senior naval advisor formed a response cell for the JTF headquarters at Maxwell.

collaboration among professional educators oriented on similar objectives ought to raise the overall quality of joint professional military education

This is not the first time the Army and Air command and staff colleges have engaged in a joint exercise program, illustrating the risks inherent in the long-term viability of such initiatives. During the late 1990s, both schools participated in a computer adjudicated wargame known as Prairie Warrior. Because it was an execution exercise, Prairie Warrior suffered a problem also experienced at the National Training Center (NTC) at Fort Irwin, California, during that era. Neither Service could operate at its full potential in Fort Irwin's battlespace without creating an unsatisfactory learning situation for the other Service.

This "NTC conundrum" meant that airpower had to be unrealistically constrained in Prairie Warrior; otherwise, the Air Force's capability to destroy conventional enemy forces would result in Army students not having a challenging, stressful, force-on-force experience. As a result, Prairie Warrior died in 2001; it simply was unable to serve the educational objectives of both schools.

A properly designed *planning* exercise, however, can resolve the conundrum because a planning exercise can challenge the full capabilities of each Service. Also, as has been underscored by recent operations, much planning remains to be done beyond the destruction of the enemy's conventional military power to achieve our nation's strategic objectives. Indeed, after two iterations of the contemporary joint exercise, both the Army and Air Force command and staff colleges are satisfied with the overall construct and its ability to meet both institutions' educational objectives.

USJFCOM's Standing Joint Force Headquarters provided Information Workstation (a collaborative planning software used in many combatant commands), which enabled most of the students to remain at home station. This feature makes the exercise affordable and more realistic, as Service component headquarters rarely are geographically collocated. Each headquarters also maintained a common operational picture thanks to the Marine Corps Command and Control Personal Computer program. Additionally, each school exchanged 20 students and 2 faculty members. These personnel replicated such doctrinal liaison units as the air component coordination elements, battlefield coordination detachments, and special operations liaison elements.

Sending 20 students and 2 faculty members on temporary duty assignments from each college was one of the more expensive features of the exercise. Even though the exercise could be conducted without such an exchange, all agreed that it was worth the cost. Students coming from their own Service's intermediate education college have been imbued with the latest Service culture, doctrine, and perspectives on the operational level of war. Therefore, they are better equipped to represent their Service's component headquarters in the JTF.

Each JTF and its components engaged in a 5-day crisis action planning exercise, which began with a warning order and finished with a course of action decision briefing at each headquarters—the deliverable was a Commander's Estimate. The scenario, set in the Caucasus in the year 2013, has been used at CGSC for several years. In it, U.S. European Command (USEUCOM) forms a JTF to deter a fictional country, Ahurastan, from invading Azerbaijan, and to defeat it if necessary. The JTF joint operational area encompasses Georgia, Azerbaijan, Ahurastan, Turkey, and a large portion of the Black Sea.

The scenario educates students about an area with strategic significance because of the oil resources of the Caspian Sea region and the existence of various real ethnic tensions. Since the exercise is unclassified, it allows international officer students at the colleges to participate as coalition partners, some in key planning positions. The exercise name, Operation *Caspian Guard*, takes its name from the USEUCOM security cooperation plan for the region.

A significant innovation in 2007, controversial in some quarters, was having senior mentors instead of students play the role of JTF commanders. Initially, there was some skepticism about using senior mentors as commanders because it would deprive each JTF of an important student leadership position. Some were also concerned about the negative impact that such senior participants might have on the educational atmosphere.

The loss of one student leadership position in each JTF, however, out of the many other leadership positions available proved to be inconsequential. Moreover, having retired three- and four-star generals as JTF commanders increased the realism for the students and provided them valuable experience interacting with senior officers. It also gave the senior mentors, who are among the most knowledgeable and experienced officers in the joint educational community, an opportunity to ensure that doctrinal concepts and processes were being properly applied. Finally, playing the role of JTF commander provided the senior mentors a position in the exercise that actually increased their coaching opportunities because the commander is the focus of everyone's attention and controls the tempo of the planning. Faculty and students agreed that having the senior mentors as JTF commanders was helpful.

A Joint Interagency Coordination Group (JIACG) was formed at CGSC to support the exercise. It consisted of approximately 12 representatives of various non-DOD organizations. It included a former Ambassador to countries in the region and representatives from the Department of State, U.S. Agency for International Development, Federal Bureau of Investigation,

and nongovernmental organizations. The JTF at Maxwell coordinated with the JIACG through video teleconference. It was an eye-opening experience for many students and proved so beneficial that plans called for the 2008 iteration of the exercise to also include a JIACG at Maxwell.

Conducting collaborative, parallel planning in a truly joint environment, one with all Service components present, is indeed challenging. Differing Service perspectives and cultures, inevitable communications problems, and pressure of meeting deadlines—in collaborating and influencing the joint force commander's planning process as well as the parallel planning for one's own component—add a degree of realistic complexity beyond that of most other schoolhouse exercises.

More importantly, by engaging our students in a truly joint experiential learning environment, we better instill collaboration among Service components as a shared value in joint operations planning. Planners will instinctively alert the other components at mission receipt, instead of later in the process as occurred during Operation *Anaconda*. For these reasons, a joint collaborative planning exercise would make an ideal capstone exercise at the end of the normal academic year—around late May or early June for all intermediate Service colleges.

A capstone exercise would provide a degree of scheduling certainty needed for a joint exercise program involving all of the intermediate level education institutions. Scheduling the exercise at the end of the normal school year would also ensure that all participants have finished their joint professional military education subjects, and thus be prepared for an advanced crisis action planning exercise. Due to multiple start times at the Army and Navy command and staff colleges, such an end-of-year joint exercise might not be possible for all classes of students. But each school does have a class that graduates around June.

One of the main obstacles to a joint capstone exercise is synchronizing the schedules among the intermediate Service colleges. A horizontal agreement among schools is a risky endeavor for curriculum planners for reasons mentioned above. The senior Service colleges have had some success with horizontal agreements for the Joint Land, Aerospace, and Sea Simulation (JLASS), but for most of the colleges it involves only a relatively small percentage of students—about 20 to 25 students each from the Army and Air war colleges, for example. Notably, though, all 16 of the Marine Corps

Students discuss issues during Joint Advanced Warfighting Studies exercise, 2007

The Fort Leavenworth Lamp (Prudence Siebert)

having retired three- and four-star generals as JTF commanders increased the realism for the students and provided them valuable experience interacting with senior officers

Command and Staff College students participated in the last JLASS.

The intermediate colleges could pursue a joint exercise using JLASS as a model, but a more transformational approach would be a large-scale capstone exercise involving a significant proportion of each school's student body. Unfortunately, a large-scale capstone exercise, one that includes enough students to have an impact on the joint community, is unlikely to happen unless an honest broker takes charge.

USJFCOM, in its role as joint force trainer, would seem to be the appropriate honest broker. Its Joint Warfighting Center has an experienced staff of exercise planners and superb senior mentors. Its role could be limited to coordinating the schedule among the schools and providing enabling resources, such as collaboration tools and senior mentors. Such a limitation would lesson the burden on USJFCOM's already full plate and allow the intermediate level schools to take care of most of the exercise planning. Including USJFCOM senior mentors, though, would provide a bridge between the operational and educational worlds and help transfer lessons learned in war to educational institutions and their students, who will soon graduate and become joint warfare practitioners.

There is fear among some intermediate level educators that allowing USJFCOM to involve itself in an intermediate level education exercise would be akin to allowing the proverbial camel's nose into the tent. USJFCOM, they argue, might exploit the exercise for its own ends, turning it into an experimentation lab for the latest draft joint operations concepts. Indeed, the educators' fear of losing control of the curriculum is based on their past experience, as they seek to balance competing requirements for change against the stability needed in their programs to ensure high quality instruction.

On the other hand, could not enlightened engagement by the combatant command responsible for joint force training significantly improve joint professional military education? Could not the same benefits coming from collaboration between intermediate colleges, which General Warner envisioned, also accrue with collaboration between the schools and the operational world through USJFCOM's involvement?

Without an influential honest broker, it is unlikely that all of the intermediate Service colleges will engage in a collaborative planning exercise with a significant level of participation. The benefits of a truly joint planning exercise among the intermediate schools—benefits in realism, student motivation, interaction with students from other Service colleges, and the unanticipated beneficial effects that would result from faculty collaboration among the institutions—will probably not occur without an honest broker. Like the Services before Goldwater-Nichols, significant change is not likely to take place unless directed by a higher authority. And because of the risks involved in taking such a bold step forward, all of the intermediate colleges are not likely to do it on their own. A leader is needed.

A joint exercise program at the intermediate service college level has the potential to significantly improve intermediate joint professional military education and, thereby, overall American military effectiveness. As the revolution in information technology annihilates the old barriers of time and space that separated our educational institutions, there is one thing that can be predicted with a fair degree of certainty. Someday, its time will come. How long it will take is the question. **JFQ**

Joint Doctrine Update

Joint Chiefs of Staff J7 Joint Education and Doctrine Division

The joint doctrine development community (JDDC) recently held the 41st Joint Doctrine Planning Conference (JDPC). This semiannual meeting is hosted by the Joint Staff J7 in support of doctrine for our warfighters. The conference continues its tradition of providing an open forum for the discussion and debate of doctrinal issues. It draws full representation from the Joint Staff, combatant commands, Services, Air Land Sea Application Center (ALSA), multiple Service schools, and many of our North Atlantic Treaty Organization allies.

The JDPC not only synchronizes the JDDC, but it also introduces some of the leading edge topics that affect today's doctrine. One such topic centered on the inclusion and expansion of key doctrine elements (KDEs) within joint publications (JPs). KDEs are distilled information extracted from approved text that represents the fundamental points and core ideas of joint doctrine, supporting terminology, and the Universal Joint Task List. They are intended to rapidly deliver concise extracts of the essential elements of approved joint doctrine on a given subject across the hierarchy. Related KDEs are linked across publications/hierarchy and include:

- a definition, if present in Joint Publication (JP) 1–02, *Department of Defense (DOD) Dictionary of Military and Associated Terms*
- related KDEs
- hyperlinks to closely related subject KDEs
- a joint doctrine description
- additional doctrine
- other source information depending on subject matter.

As the Joint Doctrine Education and Training Information System (JDEIS) matures, the process for developing KDEs will be enhanced.

Several information and decision briefs were provided at the JDPC. The Marine Corps Combat Development Command provided a decision brief on a proposed amphibious embarkation and debarkation publication. The Marine Corps cited its responsibilities within DOD to develop, in coordination with the other Services, the doctrine, tactics, techniques, and equipment employed by landing forces in amphibious operations. The recommendation to accept the Marine proposal for a new JP was unanimously passed. The JDDC voting members agreed to the development of a publication on landing force embarkation and debarkation, which would be numbered JP 3–02.1. The Marine Corps will be assigned as lead agent.

Additionally, U.S. Southern Command (USSOUTHCOM) provided a decision brief proposing the development of a joint publication on riverine operations. The brief outlined how riverine forces contribute strategic depth for inland power projection with a mission to conduct maritime security operations, as well as to control rivers and inland waterways; deny enemy use of rivers and inland waterways; and perform offensive and defensive operations. The planned riverine operating environment includes lakes, rivers, harbors, and deltas in both littoral and inland regions. The members disapproved the request by USSOUTHCOM to develop a stand-alone JP on riverine operations. The members of the working group agreed to have the Navy, as the executive agent, examine the existing guidance in JPs 3–03, *Doctrine for Joint Interdiction Operations*, 3–10, *Doctrine for Joint Rear Area Operations*, 3–31, *Command and Control for Joint Land Operations*, and 3–32, *Command and Control for Joint Maritime Operations*, and report the results at the 42d JDPC. They also agreed to pursue the option of asking ALSA, through the director of the Joint Staff J7, to develop a multi-Service tactics, techniques, and procedures on riverine operations.

Prior to the JDPC, the 13th Configuration Management Working Group was held. Discussions centered on planned JDEIS upgrades, usage data, recertifications, and the development of the Joint Doctrine Development Tool, which allows multiple users to work on a single publication simultaneously. The JDEIS team has started implementing suggestions, including a redirect splash page from the Joint Electronic Library to the JDEIS portal. As the exclusive source for joint doctrine, it is imperative to raise JDEIS awareness at all levels of military leadership.

We will continue to challenge the doctrine community by ensuring we are on the leading edge of the integration of lessons learned and identifying best practices. Doctrine development and assessment will remain the core focus areas with the implied task of identifying potential subject areas for future inclusion.

Looking for the latest in doctrine? Check out the JDEIS Web portal at https://jdeis.js.mil.

JPs Revised or Under Review, CY 2008

JP 1–05, *Religious Support in Joint Operations*

JP 1–06, *Financial Management Support in Joint Operations*

JP 2–01, *Joint and National Intelligence Support to Military Operations*

JP 2–01.2, *Joint Doctrine and Tactics, Techniques, and Procedures for Intelligence Support to Targeting*

JP 2–01.3, *Joint Tactics, Techniques, and Procedures for Joint Intelligence Preparation of the Battlespace*

JP 3–02, *Joint Doctrine for Amphibious Operations*

JP 3–04, *Joint Tactics, Techniques, and Procedures for Shipboard Helicopter Operations*

JP 3–05, *Doctrine for Joint Special Operations*

JP 3–06, *Doctrine for Joint Urban Operations*

JP 3–08, *Interagency, Intergovernmental Organization, and Nongovernmental Organization Coordination During Joint Operations*

JP 3–09.1, *Joint Tactics, Techniques, and Procedures for Laser Designation Operations*

JP 3–09.3, *Joint Tactics, Techniques, and Procedures for Close Air Support*

JP 3–11, *Joint Doctrine for Operations in Nuclear, Biological, and Chemical (NBC) Environments*

JP 3–13, *Information Operations*

JP 3–14, *Joint Doctrine for Space Operations*

JP 3–17, *Joint Doctrine and Joint Tactics, Techniques, and Procedures for Air Mobility Operations*

JP 3–18, *Doctrine for Joint Forcible Entry Operations*

JP 3–22, *Foreign Internal Defense Operations*

JP 3–24, *Counterinsurgency Operations*

JP 3–26, *Counterterrorism*

JP 3–29, *Foreign Humanitarian Assistance*

JP 3–30, *Command and Control for Joint Air Operations*

JP 3–31, *Command and Control for Joint Land Operations*

JP 3–40, *Joint Doctrine for Combating Weapons of Mass Destruction*

JP 3–52, *Joint Doctrine for Airspace Control in the Combat Zone*

JP 3–53, *Joint Doctrine for Joint Psychological Operations*

JP 3–57, *Joint Doctrine for Civil-Military Operations*

JP 3–59, *Joint Doctrine, Tactics, Techniques, and Procedures for Meteorological and Oceanographic Operations*

JP 3–61, *Public Affairs*

JP 3–63, *Detainee Operations*

JP 4–0, *Doctrine for Logistic Support of Joint Operations*

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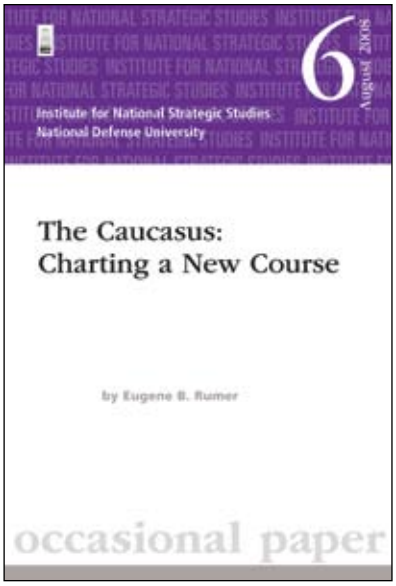

The Caucasus: Charting a New Course

by Eugene B. Rumer

Eugene B. Rumer contends that the Caucasus, once marginal to European affairs, has emerged as the most hotly contested region on the continent. The region's proximity to the Middle East, the expansion of the European Union and North Atlantic Treaty Organization, and Russia's resurgence have propelled it to the top of Europe's security agenda. The security environment in the Caucasus region has been complicated by the existence of three so-called frozen conflicts: the standoff between Armenia and Azerbaijan over Nagorno-Karabakh, and the stalemates between Georgia and the breakaway territories of Abkhazia and South Ossetia. These conflicts have acquired new urgency in the context of discussions about the final status of Kosovo, its declaration of independence, and U.S. recognition of it.

The United States and its European allies have two options for dealing with the frozen conflicts. One is to adhere to the established path of protracted negotiations intended (but unlikely) to resolve the issue, thus perpetuating their uncertain status, relegating them to the Russian sphere of influence, and creating a permanent zone of instability. The other option is to radically alter the present course and accept in principle that the Kosovo experience and the full range of lessons, both positive and negative, that it offers could serve as a conditional precedent for resolving the status of the Caucasus de facto states.

52 pages. Available only from NDU Press. Visit the NDU Press Web site for more information on this and other publications: <ndupress.ndu.edu>

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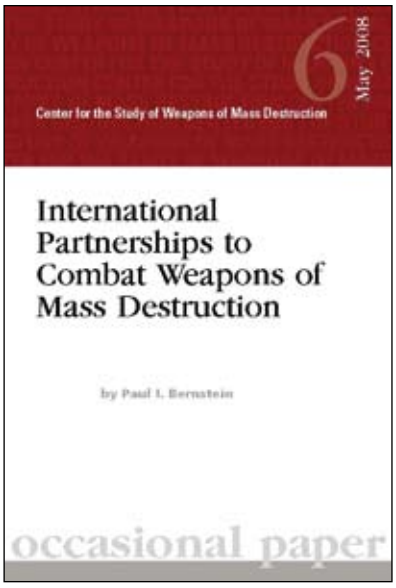

International Partnerships to Combat Weapons of Mass Destruction

by Paul I. Bernstein

This paper examines the role, manifestations, and challenges of international cooperation to combat the weapons of mass destruction (WMD) threat and poses important questions for future leaders to address in improving international cooperation in this area. The author delves into subjects such as the Proliferation Security Initiative, the G–8 Global Partnership against the Spread of WMD, financial measures, United Nations Security Council Resolution 1540, the Global Initiative to Combat Nuclear Terrorism, the Global Nuclear Energy Partnership, nuclear detection and forensics, biodefense and biosecurity, and U.S. efforts to engage with allies and other security partners to increase their capacity to deter, defend against, and respond to WMD threats.

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