



**JFQ**

**Joint Force Quarterly**

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## **Threat Assessment and Its Perils**

An Interview with  
Cecil D. Haney

Commentary on  
Chinese Military Reforms



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Cover 2 images (top to bottom): Captain Brittny Barney, 1<sup>st</sup> Helicopter Squadron, performs preflight checks of equipment inside UH-1N Huey at Joint Base Andrews, Maryland, August 3, 2016 (U.S. Air Force/Philip Bryant); Sailors secure waist catapults after launching aircraft on flight deck aboard USS Carl Vinson, under way in the Arabian Gulf, March 5, 2012 (U.S. Navy/George M. Bell); Marine with 11<sup>th</sup> Marine Expeditionary Unit surveys San Clemente Island in search of landing zone during Amphibious Squadron–Marine Expeditionary Unit Integration, prior to deployment to U.S. Pacific and U.S. Central Commands' areas of operations, July 16, 2016 (U.S. Marine Corps/Robert B. Brown)



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U.S. Army 1<sup>st</sup> Lieutenant Kelly Elmlinger, Warrior Transition Battalion, Fort Sam Houston, Texas, swims preliminary race during 2014 Warrior Games at U.S. Olympic Training Center in Colorado Springs, Colorado, September 30, 2014. More than 200 wounded, ill, and injured Servicemembers and veterans participated in the 2014 Warrior Games, an annual event featuring Paralympic-style competitions (U.S. Army/Ronda Robb)

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# From the Chairman

## Strategic Challenges and Implications

I have previously written in this column to share with you the areas where I am devoting my time and focus: joint readiness, joint warfighting capability, and the development of leaders for the future. I have also shared with you my thoughts regarding the imperative for the Joint Force to remain focused on and responsive to the current National Command Authority. That responsiveness underpins healthy civil-military relations and is the hallmark of the Profession of Arms. I now write to share with you how we are channeling these priorities and professional focus into execution.

### Joint Readiness

One of my priorities is joint readiness, which, from my perspective, is an ongoing engagement with the President and Secretary of Defense to provide timely and viable military options that, in the event of a crisis or contingency, are responsive to the desired policy endstate objectives of the National Command Authority. I also consider flexibility (transitioning from one crisis or contingency to another across the range of military options) and resiliency (sustaining what the Joint Force is doing) as part of joint readiness. Underlining the principles of

responsiveness, flexibility, and resiliency is ensuring that our men and women never enter a fair fight.

### Strategic Challenges

Many of you have heard me talk about five strategic challenges: the four potential state competitors of Russia, China, Iran, and North Korea, and the nonstate challenge of violent extremist organizations. We colloquially refer to these five challenges as the 4+1. But these challenges cannot be the only ones we plan against. I am humble about our ability to predict the future, so I use the 4+1 as a planning construct. Bench-

marking the Joint Force against one of these challenges or two of these state challenges simultaneously, along with violent extremism, helps inform our assessment of the current inventory of current joint capabilities and capacities. Looking at the trajectory of capability development in the context of the 4+1 also informs priorities for joint capability development. I assume that if we build a force that can deal with the challenges associated with the 4+1 today and in the future, we will have a Joint Force that can respond to the unexpected and that has a competitive advantage against any potential adversary.

## Implications

The five strategic challenges have a number of implications for the Joint Force. The first one is foundational. We need a balanced inventory of joint capabilities that allow us to deter and defeat potential adversaries across the full range of military operations. As a nation, we do not have the luxury of choosing between a force that can fight the Islamic State of Iraq and the Levant and one that can deter and defeat a peer competitor. Nor do we have the luxury of choosing between meeting our current operational requirements and developing the capabilities we need to meet tomorrow's requirements. Getting that balance right—between current requirements and future requirements—will probably be one of the most important non-operational challenges we have as a team over the next few years.

The second implication is the need for us to more effectively employ the military instrument of national power to address the challenges Russia, China, Iran, and North Korea present. Each of these nations, in different ways, fully leverages economic coercion, political influence, unconventional warfare, information operations, cyber operations, and military posture to advance their interests. This is competition with a military dimension that falls below the threshold that would trigger a traditional and decisive military response. And since these countries compete in ways that mute our response, they

continue to advance their interests at the qualitative and quantitative expense of our own.

The third implication, and to me one of the most significant, is that we have a mandate to keep pace with the character of war in the 21<sup>st</sup> century. While the nature of war—the violent clash of political will—has not changed, we should expect that any future conflict is going to be transregional, rapidly crossing the boundaries of geographic combatant commands; multidomain, simultaneously involving combinations of land, sea, air, space, and cyberspace operational domains; and multifunctional, including conventional operations, special operations, ballistic missiles, strike, cyber, and space capabilities. Not only will the pace and scope of future conflict be accelerated, but we are also going to see these functional capabilities fielded by both state and nonstate actors who will continually look for ways to harness those capabilities to exploit our vulnerabilities.

Therefore, the fourth implication is the need for greater strategic integration in the future, both in our strategy development and in our decisionmaking processes. The intent is to build a framework within which we can address these 4+1 challenges across the five operational domains with which we are dealing and the many associated functions. By expanding the way we develop our approach to Russia, China, Iran, and North Korea, we are working to expand the intellectual capital that we are expending on these challenge sets, with the intended result of opening the aperture of viable and timely options to our National Command Authority. The next version of the National Military Strategy is being written to support this endstate.

## Strategic Integration

To increase strategic integration in our decisionmaking process, the Joint Staff and I are working on how to better organize ourselves and organize information from across the Joint Force to better facilitate National Command Authority decisionmaking in a timely manner. We need to give the President and Secretary of Defense the right

information on a routine basis so they can have real-time ability to see the fight; to visualize in time and space the opportunities to seize the initiative; and to better identify potential opportunity costs. Over time, as we successfully help the Secretary of Defense to see the Joint Force better, it will inform the assessment process to make recommendations for the prioritization and allocation of resources across all the combatant commands. In short, we are working to develop the conditions to exercise mission command at the strategic level.

What drives me, and what motivates our Joint Staff team, is the changing character of war. How do we get more agile? How do we frame decisions for our senior leadership in a more effective way? Just like every other endeavor in our profession, it begins with a common understanding of the threat, and a common appreciation for the capabilities and limitations of the Joint Force, and then a framework within which we could make real-time decisions that will most effectively employ that force.

It remains an honor to serve as your Chairman, and I look forward to hearing from you. JFQ

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





Painted by Auguste Couder in 1836, *Bataille de Yorktown* shows Rochambeau and Washington giving final orders before battle (Palais de Versailles, France)



## Executive Summary

Living near or visiting the Nation's capital, you cannot escape the weight of history that surrounds you. From the monuments to the historic buildings, the trails and battlefields, the names on the roads—even the geography itself—force you to consider what happened in the past and what might happen in the future. Even with a political process that at times seems to be stagnant and combative, our nation continues to do what must be done. This is something George Washington knew some 235 years ago when he stopped by Mount Vernon, the home he had not visited for 6 long years of war, as he moved his headquarters toward what would be the most important battle of the Revolutionary War, Yorktown.

By the spring of 1781, based on a long series of less-than-successful

engagements with the British, Washington believed the way forward was to attack the British stronghold in what is now New York City. Washington's French allies, led by Jean-Baptiste Donatien de Vimeur (better known as the Count de Rochambeau), had different ideas and gave Washington's forces, particularly the French Fleet, orders that did not support his plan. After a conference in Connecticut, Washington reluctantly accepted the French proposal and ordered the combined land force to march to Yorktown. He really only had the counsel of his allies to guide him, which he took primarily because his French counterparts had more extensive military experience. He must have been quite worried about the likelihood of success as he passed his home on the banks of the Potomac some 20 miles south of what

is now our capital, where he met with his family briefly, before riding off south to his fate on the York River. Indeed, General Washington was an exceptional individual, but he could not have known what lay ahead any more than we do today. Yet he trusted his troops and his allies, who were key to his eventual victory. Particularly crucial to the land battle's success was the lesser-known Battle of the Virginia Capes, where an outnumbered, outgunned, and out-maneuvered British Fleet had left Charles Cornwallis to fend for himself days before Washington arrived. The French and American armies (with the larger and more experienced number being the former) would go on to defeat the British in a town not far from our largest naval base at Norfolk and just a few hours' drive from Mount Vernon. From such a gamble, relying on

friends without any real confidence in the outcome, perhaps our greatest military commander achieved victory.

Our history is full of similar examples where the time was not bright in terms of prospect, but we endured in part due to the help of our friends such as the French. In more recent times this reliance on allies repeated itself as the North Atlantic Treaty Organization (NATO) decided to support its most powerful member in the moments after attacks on New York City and the Pentagon occurred 15 years ago last month. Moreover, NATO came to the aid of one of its members in an unprecedented out-of-area operation that probably few outside of the military probably know about. NATO actually took the burden of shoring up U.S. domestic air defense in the days and months after 9/11 with its NATO Airborne Early Warning aircraft and crews of international airmen while our forces were engaged overseas. While we are the world's most essential power, we are never really alone or independent from the rest of the world. One of our authors in this issue helps to reinforce that point while others help us better understand the realities of this very different world we inheritors of Washington's gamble must live in. We are up against many challenges, but we are not alone in how we might deal with them.

In Forum, John Benedict helps us work out what the future of national and international security will bring, and discusses the trends that will impact where power will be found in the international system of states, what threats will arise, and how military operations could be applied to deal with them. As we look to the future and build on the Third Offset Strategy-related articles in the last issue of *JFQ*, Brent Sadler offers an interesting and compact look at how humans and machines will interact in the battlespace ahead. Daniel Hughes and Andrew Colarik explore the nature of cyber capabilities, their impact on warfare, and the utility of cyber weapons for a growing number of players internationally. Given the growing number and diversity of the threats to global security, it would be easy to see these weapons in the aggregate as

larger than anything we have seen before. Helping us to keep things in perspective, Andrew Stigler suggests we need to avoid "supersizing" these threats and offers a simple threat assessment methodology that could help.

In JPME Today, we have two articles that offer thought-provoking points of view. First, continuing the theme of how to realize the Third Offset Strategy, Paul Norwood and Benjamin Jensen describe how to wargame emerging concepts from this important evolving area of interest and how the war colleges might assist the Department of Defense in finding a way forward. Next, John Kuehn helps us see a simple truth about the power of an advocate for joint professional military education on Capitol Hill.

China continues to be a source of fascination to scholars and pundits alike. In Commentary, experts from National Defense University (NDU) and beyond help to update you on the People's Liberation Army (PLA). For some time now, NDU's Center for the Study of Chinese Military Affairs, which is a part of the Institute for National Strategic Studies, has focused on the ongoing reforms being made within the PLA. Phillip Saunders, the center's director, and John Chen discuss these reforms and whether they favor the Chinese ground forces over other PLA capabilities. Michael Chase and Jeffrey Engstrom offer the view that these reforms are aimed at curbing corruption and making the PLA a more joint and integrated force. Roger Cliff sees these reforms as insufficiently dealing with an organizational culture that inhibits PLA effectiveness. One of the opaque parts of China's military strength is its nuclear force, which David Logan discusses through the lens of these ongoing reforms. And what about Taiwan? Joel Wuthnow offers some valuable insights on how long the PLA might take to become joint and what that means for those who are concerned about Taiwan's defenses.

Features leads off with my interview of Admiral Cecil B. Haney, USN, commander of U.S. Strategic Command. He provides his perspective from a position with responsibilities that include leading the forces with arguably the most

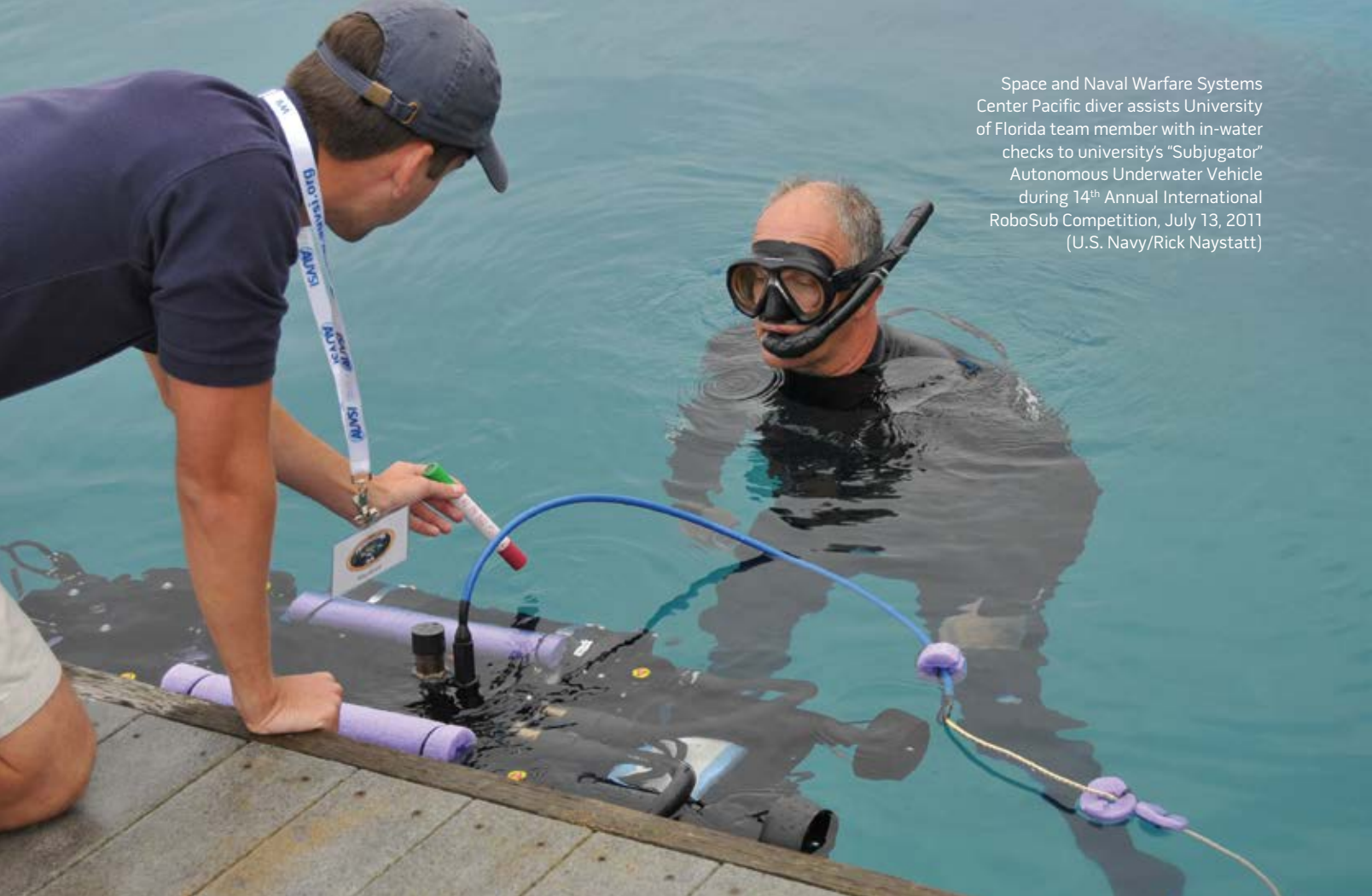
destructive power in the world. His personal story is equally remarkable as few would have thought it likely a young man growing up in the 1960s in a Washington, DC, neighborhood such as his could have achieved such success or been given such awesome responsibilities. We then continue our discussion of global health issues, and catch up on what NATO has been doing in recent years. Spoiler alert—more than you think. Brian Flynn and his co-authors believe the U.S. military has a significant role to play in improving mental health around the world. Sebastian Kevany and Michael Baker make a broader case for global health through a strategy of engagement, which the United States can do so well. NATO has come in for some criticism for a number of perceived as well as actual faults, but G. Alex Crowther provides the facts to show how engaged the Alliance is and why this is important.

Often called the forgotten war, the Korean War was more than just two opposing armies fighting up and down the peninsula. In Recall, Corbin Williamson takes us to the decks of the fighting ships involved in joint operations around the peninsula. In Joint Doctrine, Dale Eikmeier returns to *JFQ* with his views on the center of gravity and gives us an excellent commentary on a key element of any military planner's or strategist's lexicon. We also have three excellent book reviews and, as always, our Joint Doctrine Update for your consideration.

Whether we will find ourselves dealing with budget reductions, confronting epidemics, sweeping up the 1s and 0s after a "cyber Pearl Harbor," challenging nuclear threats, space attacks, or invasions by little "green men," or just dealing with our own fears of what the future holds, sometimes taking a look back helps give perspective that our nation still stands because when times are tough, we rely on ourselves, our leaders, and our friends to help us make it through. This is the fundamental insight of Washington as he rode south. We hope these pages provide you with similar insights about how to deal with our world. *JFQ*

WILLIAM T. ELIASON  
Editor in Chief





Space and Naval Warfare Systems Center Pacific diver assists University of Florida team member with in-water checks to university's "Subjugator" Autonomous Underwater Vehicle during 14<sup>th</sup> Annual International RoboSub Competition, July 13, 2011 (U.S. Navy/Rick Naystatt)

# Global Power Distribution and Warfighting in the 21<sup>st</sup> Century

By John R. Benedict, Jr.

**T**he U.S. national security community needs to focus more on the driving forces and likely associated consequences that will influence warfighting in the 21<sup>st</sup> century. A disproportionate amount of effort is spent by national security experts on narrow problem and solution spaces without an adequate appreciation of broader trends

and potential shocks that could dramatically change U.S. national security perspectives. By largely ignoring these longer term factors, the U.S. military is unlikely to develop the needed national defense capabilities to deal effectively with critical threats in this emerging environment. With even greater fiscal constraints predicted for the U.S.

Department of Defense (DOD) in the decades to come, it is crucial that U.S. military forces and their capabilities be properly aligned to counter a wide spectrum of threats and challenges that could undermine U.S. national security interests in the first half of this century and beyond.

## Drivers and Trends for U.S. Security

The first driving force that deserves more recognition is the nature and diffusion of power globally. U.S.

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power is less influential and dominant than it was from World War II to the immediate post–Cold War era. In many instances “coalitions of the willing” are now much harder to form and sustain. Consensus-building in international forums is difficult to achieve. It is much easier for opposing actors to be disruptive and to stop initiatives than it is to move these initiatives forward. Disruptions that impede progress at dealing with international issues can occur from nonstate entities as easily as from nation-states. Nation-state legitimacy and authority continue to erode in many regions with the populace identifying more with their religion, ethnicity, race, tribe, class, or other affiliations. These nonstate entities and their impact on national security problems are more evident in the morning headlines every day. As Moisés Naím has argued, obsessing primarily or exclusively about great power rivalries is a red herring that prevents a realistic view of nonstate entities that are dramatically reshaping U.S. national as well as international security interests.<sup>1</sup>

The second driving force is the accelerating pace of, and easier access to, technology mostly being driven by the commercial sector. Fewer technology developments are the exclusive domain of powerful nations and their militaries as occurred during the Cold War.<sup>2</sup> Some of the scientific areas being dominated by nonmilitary research and development are additive manufacturing, including:

- 3D printing
- robotics, autonomy, and artificial intelligence
- energy generation and storage
- synthetic biology
- biotechnology
- nanotechnology
- information technology.

It is not farfetched to imagine open-source design developments and adaptive crowdsourcing by individuals and groups that could allow nonstate entities to “out-innovate” states encumbered by large bureaucracies. It does not take much imagination to conceive of cheap, effective weapons—ranging from the

highly disruptive to the absolutely catastrophic—in the hands of individuals or groups with few of the same policy, legal, or ethical impediments for employing them that the U.S. military would have.<sup>3</sup>

The first and second aforementioned drivers are largely empowered by a third one: global communications, such as the Internet and social media, which can have both positive and negative effects. The global communications network accelerates and amplifies ideas and events in unprecedented ways compared to the recent past. This trend is unlikely to subside, and it will continue to slowly undermine state authority, have disproportionate influence on state actions and policies, empower and facilitate groups and movements, and allow technologies and associated design concepts to proliferate worldwide. More individuals and groups will be able to perceive their disadvantaged positions compared to others in the world. Access to other parties with similar grievances will facilitate movements, enable recruiting and radicalization, and support the coordination and execution of terrorist, insurgent, criminal, and other disruptive activities domestically and abroad.<sup>4</sup>

One additional driver that will continue to have a large impact on U.S. national security and global security objectives is the economic power shift from West to East. This “rise of the rest” has diminished the previous dominance of both the United States and the West in terms of economic, political, and security matters. Leading this economic shift from West to East is China, whose emboldened leaders are seeking what they believe to be their rightful place in the world order. No one can be certain if Chinese aspirations to become the new hegemon in East Asia, with a resulting power structure unfavorable to the United States, will actually occur. But few can argue that the relationship between China and the United States is fundamentally important to the interests of both countries and could largely determine future security and stability in the Asia-Pacific region, the vitality of the economies for both nations, and the credibility and influence of American and Chinese power around the world.<sup>5</sup>

These four overarching drivers and other factors will contribute significantly toward diminished global governance trends that could alter U.S. national security perspectives and the future use of the U.S. military in essential ways. First, U.S. influence is being gradually reduced due to its tarnished “brand” from various factors or events including the 2008 global financial crisis, the less than conclusive outcomes in Afghanistan and Iraq, and the perceived U.S. domestic political dysfunction. Many U.S. alliances have weakened without a common threat, causing respective priorities and interests to diverge.<sup>6</sup>

Second, the potential for U.S. retrenchment and disengagement from many of its traditional roles in world affairs is increasing. Much of the American public is frustrated by U.S. global obligations and foreign entanglements that have had questionable effects and return on investment. They see the “American Dream” eroding and want their government to focus more on improving their standards of living rather than engaging in dubious international endeavors.<sup>7</sup>

Third, various global institutions are gradually eroding in influence.<sup>8</sup> These include, but are not limited to, the United Nations, International Monetary Fund, World Trade Organization, and World Bank. A more fragmented or regional world order with reduced U.S. leadership will make it particularly difficult to adequately address critical global challenges. Examples of these possible challenges are nuclear proliferation, international terrorism, large-scale issues related to climate and environmental effects, global financial instability, global economic stagnation, potential worldwide pandemics, global energy availability and associated price volatility, emerging problems in the global commons such as within each of the cyber and space domains, and large-scale regional instabilities or conflicts.

## Four Crucial Threat Concerns

The driving forces and trends delineated in the previous section could have significant impact on four crucial threat concerns for the U.S. military in the 21<sup>st</sup> century. First, increasing global



Airman loads AGM-86B air-cruise launch trainer missile onto B-52H Stratofortress, February 26, 2014, at Minot Air Force Base, North Dakota (U.S. Air Force/Aaron D. Allmon II)

disorder, instabilities, and insecurities could occur with much of the world becoming more dangerous and chaotic.<sup>9</sup> This trend toward a more disorderly world, should it happen, would be largely driven by the rise of malevolent nonstate actors, reduced authority and legitimacy of nation-states in many regions, and decreased ability to provide effective global governance.

A second threat concern would be the further rise of regional hegemony of revisionist powers such as China, Russia, and Iran, whose objectives often clash with U.S. national interests. Should these regional developments occur, particularly as a result of reduced U.S. influence and engagement in those same regions, then the likelihood of adverse regional competition, arms races, and state conflict could be increased.<sup>10</sup>

A third threat concern involves the rise of “super-empowered” individuals and groups capable of levels of violence formerly only within the purview of nations.<sup>11</sup> This ominous threat development is primarily enabled by the increased access to advanced technology

by nonstate actors. It represents the dark side of globalization and can take many forms. Imagine individuals or groups operating in garages or small shops employing readily available gene-splicing equipment and genome sequences to synthesize lethal biological agents based on information found in the public domain.<sup>12</sup> Also, consider the possibility of nonstate actors relying on open-source designs and 3D printing to build insect-size drones capable of delivering deadly poisons to assassinate world leaders.<sup>13</sup> Finding these individuals or groups around the globe easily exceeds the law enforcement capabilities in most locales. Thus there is a significant role to be played by multinational intelligence assets, military forces, and other organizations.

The final threat concern would largely complicate the other three. It is a greatly increased level of nuclear proliferation beyond the gradual erosion of the Treaty on Non-Proliferation of Nuclear Weapons that we see today.<sup>14</sup> This proliferation among nations could be enabled if the U.S. nuclear umbrella for key allies

was no longer viewed as credible, for example, by perceived U.S. disengagement from their regions. Increasing the number of nuclear nations in East Asia, the Middle East, or elsewhere would correspondingly increase the potential for nuclear accidents, crises, and conflicts in these areas. In addition, proliferation to nonstate actors could be caused by the nexus of nuclear proliferation among nations and the increased access to advanced technology including nuclear weapon designs, nuclear or radiological materials, and related expertise.

### **Need for a Bifurcated Military Approach**

Given these four threat concerns, each of them serious in its own right, how does the U.S. military need to be aligned in order to protect or further U.S. interests in this dangerous future? It needs to adopt a bifurcated approach to deal with both nation-state and non-state threats. Neither type of threat can be considered a “lesser included case” of the other. They demand significantly different approaches.



To counter nation-state threats posed by countries ranging from near-peer rivals to rogue states, the U.S. military must be prepared to conduct high-tech warfare in harsh antiaccess/area-denial (A2/AD) environments.<sup>15</sup> This would require U.S. forces to have advanced air-missile defenses capable of handling large-capacity adversary attacks to leverage certain U.S. undersea capabilities for asymmetric advantage and to project advanced strike capabilities effectively against a variety of adversary targets. To prevail in high-tech warfare, the military must be able to achieve information dominance by protecting its own assets and by countering those of the adversary including in the crucial space domain. Advanced information operations such as electronic warfare, military deception, cyber attacks, and psychological warfare will need to be integrated with kinetic attacks to achieve maximum effects. The military will need to maintain an adequate and coherent nuclear deterrence posture, a topic that has been largely neglected by portions of the national security community since the end of the Cold War.<sup>16</sup> It will also need to be capable of countering ballistic missile nuclear threats from rogue nations such as North Korea, and be prepared to fight in limited nuclear wars if an adversary should make a potentially ill-advised decision to initiate such a conflict.

Increasing access by nations to commercial technologies will likely translate to effective military applications that will significantly close the gap with the U.S. military.<sup>17</sup> In the future, U.S. ground forces cannot count on air superiority due to advanced missiles and other air-borne threats, or the ready availability of satellite communications (SATCOM) and GPS, or being able to conduct operations in strictly non-weapons of mass destruction (WMD) environments. This means that gaining access to areas of operation, conducting expeditionary maneuvers, and defending ground units could prove much more challenging than it has been in recent conflicts. Similarly, U.S. maritime forces cannot count on air superiority, control of the undersea environment due to advanced adversary submarines and other undersea

weaponry, or ready access to SATCOM and GPS. As a result, defense of maritime forces and power projection by those same forces could be much more difficult than in the recent past. In future conflicts U.S. air and space forces cannot count on air and space superiority due to advanced integrated air defenses and effective kinetic and nonkinetic antisatellite techniques of their opponents. This means that conducting strikes, close air support, and other missions could be much more challenging than in recent history. Despite these challenges, the United States should not overprepare and overinvest against nation-state opponents at the cost of being ill-prepared for conflicts or contingencies involving nonstate actors.

To counter nonstate threats, including potential super-empowered individuals and groups of terrorists, insurgents, criminals, and other bad actors, significant U.S. military resources and capabilities will need to be developed. This means continuing counterterrorism, including efforts to penetrate adversary information and other networks. It could evolve to increased homeland defense roles and capabilities plus key support to various homeland security endeavors such as combating WMD. Furthermore, U.S. forces will have to improve their ability to operate and fight in urban, mountainous, or other demanding environments. The U.S. military must also increase its ability to deal with so-called hybrid warfare situations (for example, those involving surrogate or proxy forces operating below the threshold of war or adversaries employing an innovative mix of low-tech and high-tech weaponry). Finally, the U.S. military needs to upgrade its messaging capabilities to gain crucial support for its irregular operations.

As indicated earlier, the role of the U.S. military in homeland defense is likely to be elevated in the future due to the increased threat from advanced technologies and systems falling into the hands of nonstate adversaries. Examples of these emerging threats include:

- autonomous undersea vehicles or deep submersible vehicles cutting undersea cables<sup>18</sup>

- manned “tourist submarines” or mini-submarines entering a major U.S. harbor and detonating 5 to 10 tons of high explosives under an oil tanker or liquefied natural gas carrier<sup>19</sup>
- a ship-launched torpedo detonating a radiological dispersal device and wreaking havoc on a major port or base<sup>20</sup>
- mobile mines or improvised underwater explosive devices deployed from surface vessels and detonating against various targets transiting to and from U.S. ports<sup>21</sup>
- heavyweight torpedoes deployed from a camouflaged gravity launcher on a merchant ship, homing on the wake signature of a nearby transiting cruise ship, and detonating lethally under thousands of passengers<sup>22</sup>
- a nuclear-tipped cruise missile fired from a merchant ship or from across the U.S. border and targeting a major urban area<sup>23</sup>
- a ballistic missile with an electromagnetic pulse (EMP) warhead fired from a merchant ship off the continental United States and disabling a major portion of the electric grid for weeks to months<sup>24</sup>
- an unmanned aerial system dispensing deadly biological agents over a dense U.S. city.<sup>25</sup>

If these types of threats develop, it may become necessary to divert key DOD assets to provide the needed homeland protection.

### Additional Perspectives

In recent history there has been a diminished willingness of states with traditional militaries to make full use of their destructive power due to policy, legal, regulatory, ethical, moral, and other reasons. These constraints will only be compounded in the future for the U.S. military, particularly when dealing with less discriminating nonstate actors and rogue or desperate nations who have access to advanced technologies. For example, certain transnational terrorists would attempt to employ nuclear or radiological weapons against U.S. or



Sailor assigned to USS *Mustin* stands watch in ship's combat information center during Exercise Valiant Shield 2014, which integrates about 18,000 U.S. Navy, Air Force, Army, and Marine Corps personnel, more than 200 aircraft, and 19 surface ships for real-world joint operational experience, September 16, 2014 (U.S. Navy/Declan Barnes)

other civilian populations if they had an opportunity. Some adversary nation-state militaries, if losing to the United States in a conventional conflict and their leadership feared regime change and its very survival, could choose to employ tactical nuclear weapons against U.S. forces. Conversely, current U.S. policy deemphasizes employment of tactical nuclear weapons on the battlefield.<sup>26</sup> Thus the U.S. military could be viewed as a “disadvantaged user” when it comes to tactical nuclear weapons. Similar examples could be provided for chemical and biological weapons.

Another related illustration is in the realm of EMP weapons. Future adversaries may not hesitate to employ EMP against space and terrestrial targets. U.S. policy is to avoid use of these weapons if they would heavily damage civilian infrastructure. Some U.S. adversaries in the future would be equally indiscriminate in employing the following capabilities:

- offensive cyber weapons or physical attacks against critical civilian infrastructure, such as power grids, financial networks, communication networks, and water and food supplies

- electronic warfare jamming against civilian assets such as GPS
- fully autonomous armed robots
- nanotechnology weapons
- biotechnology-enhanced “super-soldiers”
- kinetic weapons in space with the potential to create debris fields that render portions of that domain unusable.

As a possible disadvantaged user in these and other areas, the U.S. military will need to adapt and compensate for utterly ruthless opponents who are relatively unconstrained by rules of engagement, disproportionate effects, and the need to minimize destruction of infrastructure and civilian populations.

As a final note, many national security problems are such that “war is not the ultimate arbiter,” as Joseph Nye has so aptly stated.<sup>27</sup> This would include challenges such as those posed by international terrorism, insurgents, organized crime, maritime piracy, natural disasters, large-scale poverty, mass migration, genocide and other widespread human rights abuses, cyber threats, infrastructure attacks, and nuclear proliferation.

Although military power is unlikely to prove decisive by itself, it could provide a crucial underpinning for nonmilitary components of power such as diplomatic, intelligence, economic, financial, informational, and legal measures.

### Guiding Principles

So what are some of the guiding principles for DOD that are consistent with achieving a more cohesive and balanced military approach? The first principle is to emphasize fundamentals. An example would be for DOD and other elements of the national security community to place as much focus on the information and cyberspace domain as they have traditionally done for the ground, maritime, air, and space domains. Information operations have always been important in warfare.<sup>28</sup> But dominating the information domain could prove to be the coin of the realm in 21<sup>st</sup>-century warfare. Another example is for DOD to maintain its technological edge by greater leveraging of commercial developments in many fields,<sup>29</sup> thus avoiding an overreliance on technology developments within the Defense Department unless absolutely necessary.

The second principle is to emphasize prevention. An illustration would be for DOD to give comparable emphasis to peacetime activities designed to deter and prevent conflicts as it has historically given to planning for war if deterrence and prevention measures fail. This would include a revitalization of nuclear deterrence, not so much by increasing capability or capacity, but by clearly articulating its purpose and continued importance.<sup>30</sup> Revitalization would have a three-fold effect: It would boost morale for those in the military assigned to this mission; it would clarify to U.S. allies and partners any limitations on the nuclear umbrella that is being provided to them; and it would also increase the credibility of the U.S. nuclear deterrent to any potential adversaries.

The third principle is to reduce money pits. An example would be for DOD to seriously address its increasing human capital expenditures, which are unsustainable on their current



trajectory.<sup>31</sup> This adverse trend needs to be reversed in a manner that is not detrimental to the viability of the all-volunteer force. On the material side, DOD needs to reduce its focus on maintaining force structures for large, expensive traditional platforms or systems if they require significantly increased levels of protection or have decreased overall utility against key portions of the emerging threat spectrum.<sup>32</sup>

The fourth principle is to be selective and prioritize. An illustration would be to make only large military resource commitments and expenditures (people, equipment, funding) in areas that clearly involve either vital or very important U.S. national interests.<sup>33</sup> A corollary for the U.S. Government and DOD is to stop attempting to do more with less. This does not work. It is necessary, in fact, to make hard choices by setting priorities that ultimately will help to prevent stretching U.S. military forces too thin. Finally, the U.S. Government and its military must develop effective strategies for each of the long-term national security challenges to which they are committed. Correspondingly, as Mike Vickers stated in recent Senate testimony, the military needs “to identify a decisive element that confers enduring advantage, and then to focus actions and resources on it.”<sup>34</sup>

The fifth principle is to avoid tunnel vision. DOD is focusing strongly on countering A2/AD threats posed by certain militaries in key regions such as Europe, the Middle East, and the Western Pacific. As important as this is, it should not be done to such a degree that it is at the expense of dealing with other more likely threats and challenges.<sup>35</sup> For example, irregular warfare and counterterrorism efforts by the military Services against nonstate actors will need to increase to ensure sufficient preparedness against the proliferation of super-empowered individuals and groups, which some believe are just over the horizon. Also, despite contrary strategic guidance released by DOD in January 2012, it is imperative that the U.S. military maintain the capability to conduct counterinsurgency and stability operations of various scales.<sup>36</sup> In the future the joint force can

expect to encounter guerrilla forces, including in challenging urban environments. This could occur while either coming to the aid of an ally or partner nation or while attempting to maintain adequate security and order in the aftermath of a conflict that the U.S. military and its allies have just won.

The final principle is to be prepared for out-of-the-box situations. As an illustration, the U.S. Government, with key contributions from DOD, will need to counter challenging asymmetric approaches by potential nation-state adversaries. These include:

- financial attacks
- economic and trade destabilization measures
- sabotage or bombings
- assassinations
- extortion, intimidation, or political coercion
- cyber warfare
- psychological warfare and propaganda
- various gray zone or hybrid warfare approaches conducted through surrogates or other means.<sup>37</sup>

A second illustration is the need for the U.S. military to develop adequate mitigation measures against adversaries employing advanced technologies in which the United States could find itself as a disadvantaged user. This includes resolving policy issues regarding the U.S. military employing systems or weaponry that rely on advances in robotics and artificial intelligence, cyber warfare, directed energy, nanotechnology, synthetic biology, genetic engineering, biotechnology, and other potentially controversial areas.<sup>38</sup> Finally, the U.S. Government, including DOD, will need to dramatically increase its participation in public-private partnerships in order to provide protection against out-of-the-box threats to the homeland.<sup>39</sup> Without these partnerships it is difficult to imagine how sufficient levels of cyber security, bio security, nuclear or radiological security, EMP security, financial security, and energy and power grid security would be achievable.

## Conclusion

The primary objective for the U.S. military in a highly constrained budget environment should not be to achieve at all costs a decisive win in a major war against a near-peer rival by dominating that adversary in all warfighting domains. That objective would be extremely resource intensive and technically challenging; it would also consume large portions of future military budgets at the expense of countering other threats that also deserve significant resources and attention.<sup>40</sup> Additionally, a truly decisive win against the conventional forces of a major power could inadvertently escalate that conflict to a nuclear war.<sup>41</sup>

On the contrary, the primary objectives for the U.S. military should be to support efforts to deter adversaries and prevent a major power war as well as other types of conflicts from occurring; if a conflict does occur and is in U.S. national interests, then to help win it in terms of reaching a successful and sustainable political outcome, which may or may not involve a decisive win by the military; and to effectively contribute to mitigating a variety of global security challenges, including those posed by nefarious nonstate actors, by achieving successful outcomes as part of an overall team composed of other U.S. agencies, partner nations, and organizations. Hopefully this set of objectives for the U.S. military would be more affordable, more technically achievable, less likely to result in nuclear escalation, and better able to address a broad set of security challenges.

A properly designed, bifurcated military approach that is employed effectively in coordination with other components of national and international power would support these objectives. Focusing on major power wars and treating other national security challenges as lesser included cases, however, would not. U.S. decisionmakers in charge of developing an effective military approach to counter the emergent threats outlined herein need to choose wisely—U.S. national security and global international security in the 21<sup>st</sup> century could depend on it. JFQ

## Notes

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Unmanned Combat Air System X-47B demonstrator flies near USS *George H.W. Bush*, first aircraft carrier to successfully catapult launch unmanned aircraft from its flight deck, May 14, 2013 (U.S. Navy/Erik Hildebrandt)

# Fast Followers, Learning Machines, and the Third Offset Strategy

By Brent D. Sadler

*It is change, continuing change, inevitable change, that is the dominant factor in society today. No sensible decision can be made any longer without taking into account not only the world as it is, but the world as it will be. . . . This, in turn, means that our statesmen, our businessmen, our everyman must take on a science fictional way of thinking.*

—ISAAC ASIMOV

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Today, the Department of Defense (DOD) is coming to terms with trends forcing a rethinking of how it fights wars. One trend is proliferation of and parity by competitors in precision munitions. Most notable are China's antiship ballistic missiles and the proliferation of cruise missiles, such as those the Islamic State of Iraq and the Levant claimed to use to attack an Egyptian ship off the Sinai in 2014. Another trend is the rapid technological advances in artificial intelligence (AI) and robotics that are enabling the creation of learning machines.

Failure to adapt and lead in this new reality risks U.S. ability to effectively respond and control the future battlefield. However, budget realities make it unlikely that today's DOD could spend its way ahead of these challenges or field new systems fast enough. Consider that F-35 fighter development is 7 years behind schedule and, at \$1.3 trillion, is \$163 billion over budget.<sup>1</sup> On the other hand, China produced and test-flew its first fifth-generation fighter (J-20) within 2 years. These pressures create urgency to find a cost-effective response through emergent and disruptive technologies that could ensure U.S. conventional deterrent advantage—in other words, the so-called Third Offset Strategy.

## Narrowing Conventional Deterrence

In 1993, Andrew Marshall, Director of Net Assessment, stated, “I project a day when our adversaries will have guided munitions parity with us and it will change the game.”<sup>2</sup> On December 14, 2015, Deputy Secretary of Defense Robert Work announced that day’s arrival when arguing for a Third Offset during comments at the Center for a New American Security.<sup>3</sup>

An offset seeks to leverage emerging and disruptive technologies in innovative ways in order to prevail in Great Power competition. A *Great Power* is understood to be a rational state seeking survival through regional hegemony with global offensive capabilities.<sup>4</sup> The First Offset Strategy in the 1950s relied on tactical nuclear superiority to counter Soviet numerical conventional superiority. As the Soviets gained nuclear parity in the 1960s, a Second Offset in the 1970s centered on precision-guided munitions and stealth technologies to sustain technical overmatch, conventional deterrence, and containment for another quarter century. The Third Offset, like previous ones, seeks to deliberately change an unattractive Great Power competition, this time with China and Russia, to one more advantageous. This requires addressing the following challenges.

**Fast Followers.** Russia and China have been able to rapidly gain and sustain near-parity by stealing and copying others’ technologies for their own long-range precision capabilities, while largely pocketing developmental costs. Lateral thinking<sup>5</sup> is required to confound these Fast Followers, as Apple used with Microsoft when it regained tech-sector leadership in the early 2000s.<sup>6</sup>

**Hybrid Warfare.** Russia’s actions in Crimea and ongoing activities in Eastern Ukraine indicate both that Russia is undeterred and that it was successful in coordinating asymmetric and unconventional tactics across multiple domains.

**Narrowing Conventional Advantage.** The loss of the precision-munitions advantage increases cost for U.S. intervention, thus reducing deterrence and inviting adventurism. Recent

examples include Russian interventions (Georgia, Ukraine, Syria) and increasingly coercive Chinese activities in the East and South China seas, especially massive island-building in the South China Sea since 2014.

**Persistent Global Risks from Violent Extremists.** While not an existential threat, left unchecked, violent extremism is inimical to U.S. interests as it corrodes inclusive, open economies and societies. As a long-term ideological competition, a global presence able to monitor, attack, and attrite violent extremist networks is required.

In response to these challenges, two 2015 studies are informing DOD leadership on the need for a new offset: the Defense Science Board summer study on autonomy and the Long-Range Research and Development Planning Program. From these studies, Deputy Secretary Work has articulated five building blocks of a new offset:

- autonomous deep-learning systems
- human-machine collaboration
- assisted human operations
- advanced human-machine combat teaming
- network-enabled semi-autonomous weapons.

Central to all are learning machines that, when teamed with a person, provide a potential prompt jump in capability. Technological advantages alone, however, could prove chimerical as Russia and China are also investing in autonomous weapons, making any U.S. advantage gained a temporary one. In fact, Russia’s Chief of the General Staff, General Valery Gerasimov, predicts a future battlefield populated with learning machines.<sup>7</sup>

A Third Offset Strategy could achieve a qualitative edge and ensure conventional deterrence relative to Fast Followers in four ways: One, it could provide U.S. leaders more options along the escalation ladder. Two, a Third Offset could flip the cost advantage to defenders in a ballistic and cruise missile exchange; in East Asia this would make continuation of China’s decades-long investment in these weapons cost prohibitive. Three, it could have a multiplicative effect on presence, sensing,

and combat effectiveness of each manned platform. Four, such a strategy could nullify the advantages afforded by geographic proximity and being the first to attack.

## Robot Renaissance

In 1997, IBM’s Deep Blue beat chess champion Garry Kasparov, marking an inflection point in the development of learning machines. Since then, development of learning machines has accelerated, as illustrated by Giraffe, which taught itself how to play chess at a master’s level in 72 hours.<sup>8</sup> Driving this rapid development have been accelerating computer-processing speeds and miniaturization. In 2011, at the size of 10 refrigerators, the super-computer Watson beat two champions of the game show *Jeopardy*. Within 3 years, Watson was shrunk to the size of three stacked pizza boxes—a 90-percent reduction in size along with a 2,700-percent improvement in processing speed.<sup>9</sup> Within a decade, computers likely will match the massive parallel processing capacity of the human brain, and these machines will increasingly augment and expand human memory and thinking much like cloud computing for computers today, leading to accelerating returns in anything that can be digitized.<sup>10</sup> This teaming of man and machine will set the stage for a new renaissance of human consciousness as augmented by learning machines—a Robot Renaissance.<sup>11</sup> But man is not destined for extinction and will remain part of the equation; as “freestyle chess” demonstrates, man paired with computers utilizing superior processes can prevail over any competitor.<sup>12</sup>

Augmenting human consciousness with learning machines will usher in an explosion in creativity, engineering innovation, and societal change. This will in turn greatly impact the way we conceptualize and conduct warfare, just as the Renaissance spurred mathematical solutions to ballistic trajectories, metallurgy, and engineering for mobile cannons. Such a future is already being embraced. For example, Bank of America and Merrill Lynch recently concluded that robotics and AI—learning machines—will define the next industrial revolution and that the





Garry Kasparov, chess grandmaster and former world champion, speaking at Turing centennial conference at Manchester, June 25, 2012 (Courtesy David Monniaux)

adoption of this technology is a foregone conclusion. Their report concludes that by 2025 learning machines will be performing 45 percent of all manufacturing versus 10 percent today.<sup>13</sup> It would be a future of profound change and peril and was the focus of the 2016 Davos Summit whose founder, Klaus Schwab, calls the period the Fourth Industrial Revolution.<sup>14</sup> As the Industrial Revolution demonstrated, the advantage will be to the early adopter, leaving the United States little choice but to pursue an offset strategy that leverages learning machines.

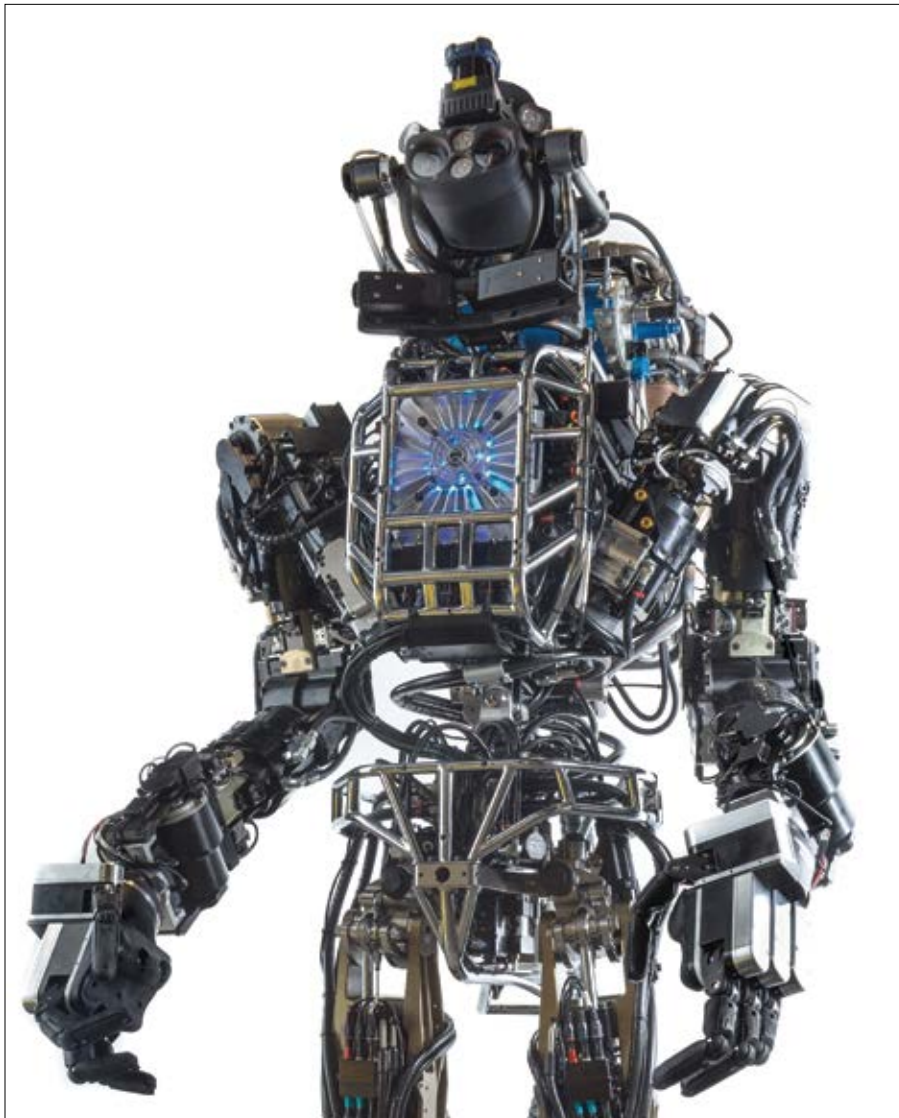
### Advantages of Man-Machine Teaming

Learning machines teamed with manned platforms enabled by concepts of operations will be a key element of the Third Offset Strategy. Advantages of this approach include:

- Speed Faster than Adversaries. Staying inside an adversary's OODA

(observe, orient, decide, act) loop necessitates learning machines that are able to engage targets at increasing speed, which diminishes direct human control.<sup>15</sup>

- Greater Combat Effect per Person. As extensions of manned platforms, teaming increases the combat effect per person through swarm tactics as well as big data management. Moreover, augmenting the manned force with autonomous systems could mitigate deployment costs, which have increased 31 percent since 2000 and are likely unsustainable under current constructs.<sup>16</sup>
- Less Human Risk. Reduced risk to manned platforms provides more options along the escalation ladder to commanders and allows a more forward and pervasive presence. Moreover, autonomous systems deployed in large numbers will have the long-term effect of mitigating relative troop strengths.
- High-Precision, Emotionless Warfare. Learning machines provide an opportunity for battlefield civility by lessening death and destruction with improved precision and accuracy. Moreover, being non-ethical and unemotional, they are not susceptible to revenge killings and atrocities.
- Hard to Target. Learning machines enable disaggregated combat networks to be both more difficult to target and more fluid in attack. Some capabilities (for example, cyber) could reside during all phases of a conflict well within a competitor's physical borders, collecting intelligence while also ready to act like a "zero-day bomb."<sup>17</sup>
- Faster Acquisition and Improvement. Incorporation of learning machines in design, production, and instantaneous sharing of learning across machines would have a multiplicative effect. However, achieving such benefits requires overcoming proprietary



Seven teams from DARPA's Virtual Robotics Challenge continue to develop and refine ATLAS robot, developed by Boston Dynamics (DARPA)

constraints such as those encountered with the Scan Eagle unmanned vehicle if better intra-DOD innovation and interoperability are to be achieved.

Realizing these potential benefits requires institutional change in acquisition and a dedicated cadre of roboticists. However, pursuing a Third Offset Strategy is not without risks.

### Third Offset Risks

Fielding learning machines presents several risks, and several technical and institutional barriers. The risks include the following challenges.

#### *Cyber Intrusion and Programming*

**Brittleness.** DOD relies on commercial industry to develop and provide it with critical capabilities. This situation provides some cost savings, while presenting an Achilles' heel for cyber exploitation during fabrication and in the field. One avenue for attack is through the complexity of programming, which leads to programming brittleness, or seams and back rooms causing system vulnerabilities.<sup>18</sup> Another is through communications vital to proper human control. Additionally, swarm tactics involving teams of machines networking independently of human control on a near-continuous basis could further expose them to attack and manipulation.<sup>19</sup>

Mitigating such threats and staying inside an adversary's accelerating OODA loop would drive increasing autonomy and decreasing reliance on communications.<sup>20</sup>

**Proliferation and Intellectual Insecurity.** The risk of proliferation and Fast Followers to close technological advantage makes protecting the most sensitive elements of learning machines an imperative. Doing so requires addressing industrial espionage and cyber vulnerabilities in the commercial defense industry, which will require concerted congressional and DOD action.

**Unlawful Use.** As competitors develop learning machines, they may be less constrained and ethical in their employment. Nonetheless, the international Law of Armed Conflict applies, and does not preclude employing learning machines on the battlefield in accordance with *jus in bello*—the legal conduct of war. Legally, learning machines would have to pass the same tests as any other weapons; their use must be necessary, discriminate, and proportional against a military objective.<sup>21</sup> A key test for learning machines is discrimination; that is, the ability to discern noncombatants from targeted combatants while limiting collateral damage.<sup>22</sup>

**Unethical War.** When fielded in significant numbers, learning machines could challenge traditions of *jus ad bellum*—criteria regarding decisions to engage in war. That is, by significantly reducing the cost in human life to wage war, the decision to wage it becomes less restrictive. Such a future is debatable, but as General Paul J. Selva (Vice Chairman of the Joint Chiefs of Staff) suggested at the Brookings Institution on January 21, 2016, there should be an international debate on the role of autonomous weapons systems and *jus ad bellum* implications.

**A New Fog of War.** Lastly, the advent of learning machines will give rise to a new fog of war emerging from uncertainty in a learning machine's AI programming. It is a little unsettling that a branch of AI popular in the late 1980s and early 1990s was called "fuzzy logic," due to an ability to alter its programming that represents a potential loss of control and weakening of liability.



### Third Offset Barriers

Overcoming the barriers to a Third Offset Strategy requires advancing key foundational technologies, adjustments in acquisition, and training for man-learning machine interaction.

**Man-Machine Interaction.** Ensuring proper human interface with and the proper setting of parameters for a given mission employing learning machines requires a professional cadre of roboticists. As with human communication, failure to appropriately command and control learning machines could be disastrous. This potential was illustrated in the movie *2001: A Space Odyssey* when the HAL 9000 computer resolved a dilemma of conflicting orders by killing its human crew. Ensuring an adequately trained cadre is in place as new systems come online requires building the institutional bedrock on which these specialists are trained. Because it will take several years to build such a cadre, it is perhaps the most pressing Third Offset investment.

**Trinity of Robotic Capability.** Gaining a sustainable and significant conventional advantage through learning machines requires advances in three key areas. This trinity includes high-density energy sources, sensors, and massive parallel processing capacity. Several promising systems have failed because of weakness in one or all of these core capabilities. Fire Scout, a Navy autonomous helicopter, failed largely due to limited endurance. The Army and Marine Corps Big Dog was terminated because its noisy gasoline engine gave troop positions away. Sensor limitations undid Boomerang, a counter-sniper robot with limited ability to discern hostiles in complex urban settings.<sup>23</sup>

**Agile Acquisition Enterprise.** As technological challenges are overcome, any advantage earned would be transitory unless acquisition processes adapt in several key ways. One way is to implement continuous testing and evaluation to monitor the evolving programming of learning machines and ensure the rapid dissemination of learning across the machine fleet. A second way is to broaden the number of promising new capabilities tested while more quickly determining which ones move to prototype. A third

way is to more rapidly move prototypes into the field. Such changes would be essential to stay ahead of Fast Followers.

While acquisition reforms are being debated in Congress, fielding emerging and disruptive technologies would need to progress regardless.<sup>24</sup> However, doing both provides a game-changing technological leap at a pace that can break today's closely run technological race—a prompt jump in capability.

### Chasing a Capability Prompt Jump

Actualizing a nascent Third Offset Strategy in a large organization such as DOD requires unity of effort. One approach would be to establish a central office empowered to ensure coherency in guidance and oversight of resource decisions so that investments remain complementary. Such an office would build on the legacy of the Air Sea Battle Office, Joint Staff's Joint Concept for Access and Maneuver in the Global Commons, and Strategic Capabilities Office (SCO). Therefore, a central office would need to be resourced and given authority to direct acquisition related to the Third Offset, develop doctrine, standardize training, and conduct exercises to refine concepts of operation. First steps could include:

- Limit or curtail proprietary use in Third Offset systems while standardizing protocols and systems for maximum cross-Service interoperability.
- Leverage legacy systems initially by filling existing capacity gaps. SCO work has been notable in pursuing rapid development and integration of advanced low-cost capabilities into legacy systems. This approach results in extension of legacy systems lethality while complicating competitors' countermeasures. Examples include shooting hypersonic rounds from legacy Army artillery and the use of digital cameras to improve accuracy of small-diameter bombs.<sup>25</sup> The Navy could do this by leveraging existing fleet test and evaluation efforts, such as those by Seventh Fleet, and

expanding collaboration with SCO. An early effort could be maturing Unmanned Carrier-Launched Airborne Surveillance and Strike, which is currently being developed for aerial refueling, into the full spectrum of operations.<sup>26</sup>

- Standardize training and concepts of operations for learning machines and their teaming with manned platforms. Early efforts should include formally establishing a new subspecialty of roboticist and joint exercises dedicated to developing operational concepts of man-machine teaming. Promising work is being done at the Naval Postgraduate School, which in the summer of 2015 demonstrated the ability to swarm up to 50 unmanned systems at its Advanced Robotic Systems Engineering Laboratory and should inform future efforts.
- Direct expanded investment in the trinity of capabilities—high-density energy sources, sensors, and next-generation processors. The DOD Defense Innovation Initiative is building mechanisms to identify those in industry advancing key technologies, and will need to be sustained as private industry is more deeply engaged.

DOD is already moving ahead on a Third Offset Strategy, and it is not breaking the bank. The budget proposal for fiscal year 2017 seeks a significant but manageable \$18 billion toward the Third Offset, with \$3 billion devoted to man-machine teaming, over the next 5 years; the \$3.6 billion committed in 2017 equates to less than 1 percent of the annual \$582.7 billion defense budget.<sup>27</sup> As a first step, this funds initial analytical efforts in wargaming and modeling and begins modest investments in promising new technologies.

### Conclusion

Because continued U.S. advantage in conventional deterrence is at stake, resources and senior leader involvement must grow to ensure the success of a Third Offset Strategy. It will be critical to develop operational learning

machines, associated concepts of operations for their teaming with people, adjustments in the industrial base to allow for more secure and rapid procurement of advanced autonomous systems, and lastly, investment in the trinity of advanced base capabilities—sensors, processors, and energy.

For the Navy and Marine Corps, the foundation for such an endeavor resides in the future design section of *A Cooperative Strategy for 21<sup>st</sup> Century Seapower* supported by the four lines of effort in the current Chief of Naval Operations' *Design for Maintaining Maritime Superiority*. A promising development has been the establishment of OpNav N99, the unmanned warfare systems directorate recently established by the Office of the Chief of Naval Operations on the Navy staff and the naming of a Deputy Assistant Secretary of Navy for Unmanned Systems, both dedicated to developing capabilities key to a Third Offset Strategy. This should be broadened to include similar efforts in all the Services.

However, pursuit of game-changing technologies is only sustainable by breaking out of the increasingly exponential pace of technological competition with Fast Followers. A Third Offset Strategy could do this and could provide the first to adopt outsized advantages. Realistically, to achieve this requires integrating increasing layers of autonomy into legacy force structure as budgets align to new requirements and personnel adapt to increasing degrees of learning machine teaming. The additive effect of increasing autonomy could fundamentally change warfare and provide significant advantage to whoever successfully teams learning machines with manned systems. This is not a race we are necessarily predestined to win, but it is a race that has already begun with strategic implications for the United States. JFQ

## Notes

<sup>1</sup> CBS News, *60 Minutes*, "The F-35," February 16, 2014.

<sup>2</sup> Deputy Secretary of Defense Bob Work,

speech delivered to a Center for a New American Security Defense Forum, Washington, DC, December 14, 2015, available at <[www.defense.gov/News/Speeches/Speech-View/Article/634214/cnas-defense-forum](http://www.defense.gov/News/Speeches/Speech-View/Article/634214/cnas-defense-forum)>.

<sup>3</sup> Ibid.

<sup>4</sup> John J. Mearsheimer, *The Tragedy of Great Power Politics* (New York: Norton, 2014).

<sup>5</sup> *Lateral thinking*, a term coined by Edward de Bono in 1967, means indirect and creative approaches using reasoning not immediately obvious and involving ideas not obtainable by traditional step-by-step logic.

<sup>6</sup> Shane Snow, *Smartsuts: How Hackers, Innovators, and Icons Accelerate Success* (New York: HarperCollins, 2014), 6, 116.

<sup>7</sup> Russia's Chief of the General Staff, General Valery Gerasimov, stated in a February 27, 2013, article: "Another factor influencing the essence of modern means of armed conflict is the use of modern automated complexes of military equipment and research in the area of artificial intelligence. While today we have flying drones, tomorrow's battlefields will be filled with walking, crawling, jumping, and flying robots. In the near future it is possible a fully robotized unit will be created, capable of independently conducting military operations." See Mark Galeotti, "The 'Gerasimov Doctrine' and Russian Non-Linear War," *In Moscow's Shadows* blog, available at <<https://inmoscowshadows.wordpress.com/2014/07/06/the-gerasimov-doctrine-and-russian-non-linear-war/>>. For Gerasimov's original article (in Russian), see *Military-Industrial Kurier* 8, no. 476 (February 27–March 5, 2013), available at <[http://vpk-news.ru/sites/default/files/pdf/VPK\\_08\\_476.pdf](http://vpk-news.ru/sites/default/files/pdf/VPK_08_476.pdf)>.

<sup>8</sup> "Deep Learning Machine Teaches Itself Chess in 72 Hours, Plays at International Master Level," *MIT Technology Review*, September 14, 2015, available at <[www.technologyreview.com/view/541276/deep-learning-machine-teaches-itself-chess-in-72-hours-plays-at-international-master/](http://www.technologyreview.com/view/541276/deep-learning-machine-teaches-itself-chess-in-72-hours-plays-at-international-master/)>.

<sup>9</sup> "IBM Watson Group Unveils Cloud-Delivered Watson Services to Transform Industrial R&D, Visualize Big Data Insights and Fuel Analytics Exploration," *IBM News*, January 9, 2014, available at <<http://ibm.mediaroom.com/index.php?s=43&item=1887>>.

<sup>10</sup> Ray Kurzweil, *How to Create a Mind: The Secret of Human Thought Revealed* (New York: Penguin Books, 2012), 4, 8, 125, 255, 280–281.

<sup>11</sup> A *learning machine*, according to Arthur Samuel's 1959 definition of *machine learning*, is the ability of computers to learn without being explicitly programmed.

<sup>12</sup> Erik Brynjolfsson and Andrew McAfee, *The Second Machine Age: Work, Progress, and Prosperity in a Time of Brilliant Technologies* (New York: W.W. Norton, 2014), 188.

<sup>13</sup> Michael Hartnett et al., *Creative Disruption* (New York: Bank of America and Merrill Lynch, April 2015), available at <[www.bofam.com/content/dam/boamimages/documents/articles/D3\\_006/11511357.pdf](http://www.bofam.com/content/dam/boamimages/documents/articles/D3_006/11511357.pdf)>.

<[www.bofam.com/content/dam/boamimages/documents/articles/D3\\_006/11511357.pdf](http://www.bofam.com/content/dam/boamimages/documents/articles/D3_006/11511357.pdf)>.

<sup>14</sup> Klaus Schwab, *The Fourth Industrial Revolution* (Geneva: World Economic Forum, 2016).

<sup>15</sup> Michael N. Schmitt, "War, Technology and the Law of Armed Conflict," *International Law Studies*, vol. 82 (2006), 137–182.

<sup>16</sup> *Growth in DOD's Budget from 2000 to 2014* (Washington, DC: Congressional Budget Office, November 2014).

<sup>17</sup> Richard Clarke, *Cyber War: The Next Threat to National Security and What to Do About It* (New York: HarperCollins, 2010), 163–166.

<sup>18</sup> Ibid., 81–83.

<sup>19</sup> Katherine D. Mullens et al., *An Automated UAV Mission System* (San Diego, CA: SPAWAR Systems Center, September 2003), available at <[www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA422026](http://www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA422026)>.

<sup>20</sup> Armin Krishnan, *Killer Robots: Legality and Ethicality of Autonomous Weapons* (Farnham, United Kingdom: Ashgate, 2009).

<sup>21</sup> James E. Baker, *In the Common Defense: National Security Law for Perilous Times* (Cambridge: Cambridge University Press, 2007), 215–216.

<sup>22</sup> "Protocol Additional to the Geneva Conventions of 12 August 1949, and relating to the Protection of Victims of International Armed Conflicts (Protocol I), 8 June 1977," Article 48, 57.4 and 51.4; Yoram Dinstein, *The Conduct of Hostilities under the Law of International Armed Conflict*, 2<sup>nd</sup> ed. (New York: Cambridge University Press, 2010), 62–63.

<sup>23</sup> Schmitt.

<sup>24</sup> House Armed Services Committee, *Acquisition Reform: Experimentation and Agility*, Hon. Sean J. Stackley, Assistant Secretary of the Navy for Research, Development, and Acquisition, 114<sup>th</sup> Cong., January 7, 2016, available at <<http://docs.house.gov/meetings/AS/AS00/20160107/104314/HHRG-114-AS00-Wstate-StackleyS-20160107.pdf>>.

<sup>25</sup> Sam LaGrone, "Little Known Pentagon Office Key to U.S. Military Competition with China, Russia," *U.S. Naval Institute News*, February 2, 2016.

<sup>26</sup> Christopher P. Cavas, "U.S. Navy's Unmanned Jet Could Be a Tanker," *Defense News*, February 1, 2016, available at <[www.defensenews.com/story/defense/naval/naval-aviation/2016/01/31/uclass-ucasd-navy-carrier-unmanned-jet-x47-northrop-boeing/79624226/](http://www.defensenews.com/story/defense/naval/naval-aviation/2016/01/31/uclass-ucasd-navy-carrier-unmanned-jet-x47-northrop-boeing/79624226/)>.

<sup>27</sup> Aaron Mehta, "Defense Department Budget: \$18B Over FYDP for Third Offset," *Defense News*, February 9, 2016, available at <[www.defensenews.com/story/defense/policy-budget/budget/2016/02/09/third-offset-fy17-budget-pentagon-budget/80072048/](http://www.defensenews.com/story/defense/policy-budget/budget/2016/02/09/third-offset-fy17-budget-pentagon-budget/80072048/)>.



Located at Naval Computer and Telecommunications Area Master Station Pacific, Wahiawa, Hawaii, Mobile User Objective System is next-generation narrowband tactical satellite communications system intended to significantly improve ground communications for U.S. forces on the move, November 3, 2008 (U.S. Navy/John W. Ciccarelli, Jr.)



# Predicting the Proliferation of Cyber Weapons into Small States

By Daniel Hughes and Andrew M. Colarik

Recent analysis of cyber warfare has been dominated by works focused on the challenges and opportunities it presents to the conventional military dominance of the United States. This was aptly demonstrated by the 2015 assessment from the Director of National Intelligence, who named cyber threats as the number

one strategic issue facing the United States.<sup>1</sup> Conversely, questions regarding cyber weapons acquisition by small states have received little attention. While individually weak, small states are numerous. They comprise over half the membership of the United Nations and remain important to geopolitical considerations.<sup>2</sup> Moreover, these states

are facing progressively difficult security investment choices as the balance among global security, regional dominance, and national interests is constantly being assessed. An increasingly relevant factor in these choices is the escalating costs of military platforms and perceptions that cyber warfare may provide a cheap and effective offensive capability to exert strategic influence over geopolitical rivals.

This article takes the position that in cyber warfare the balance of power between offense and defense has yet to

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MQ-1 Predator and MQ-9 Reaper assigned to 432<sup>nd</sup> Aircraft Maintenance Squadron provided intelligence, surveillance, and reconnaissance, especially during Operations *Iraqi Freedom* and *Enduring Freedom* (U.S. Air Force/Vernon Young, Jr.)

be determined. Moreover, the indirect and immaterial nature of cyber weapons ensures that they do not alter the fundamental principles of warfare and cannot win military conflicts unaided. Rather, cyber weapons are likely to be most effective when used as a force multiplier and not just as an infrastructure disruption capability. The consideration of *cyber dependence*—that is, the extent to which a state’s economy, military, and government rely on cyberspace—is also highly relevant to this discussion. Depending on infrastructure resiliency, a strategic technological advantage may become a significant disadvantage in times of conflict. The capacity to amplify conventional military capabilities, exploit vulnerabilities in national infrastructure, and control the cyber conflict space is thus an important aspect for any war-making doctrine. Integrating these capabilities into defense strategies is the driving force in the research and development of cyber weapons.

### The Nature of Cyber Warfare

Cyber warfare is increasingly being recognized as the fifth domain of warfare. Its growing importance is suggested by its prominence in national strategy, military doctrine, and significant investments in relevant capabilities. Despite this, a conclusive definition of *cyber warfare* has yet to emerge.<sup>3</sup> For our purposes, such a definition is not required as the critical features of cyber warfare can be summarized in three points. First, cyber warfare involves actions that achieve political or military effect. Second, it involves the use of cyberspace to deliver direct or cascading kinetic effects that have comparable results to traditional military capabilities. Third, it creates results that either cause or are a crucial component of a serious threat to a nation’s security or that are conducted in response to such a threat.<sup>4</sup> More specifically, *cyber weapons* are defined as weaponized cyber warfare

capabilities held by those with the expertise and resources required to deliver and deploy them. Thus, it is the intent to possess the skills required to develop and deploy cyber weapons that must be the focus of any national security strategy involving cyber warfare.

Notable theorists have judged that in cyber warfare, offense is dominant.<sup>5</sup> Attacks can be launched instantaneously, and there is rapid growth in the number of networks and assets requiring protection. After all, cyberspace is a target-rich environment based on network structures that privilege accessibility over security. Considerable technical and legal difficulties make accurate attribution of cyber attacks, as well as precise and proportionate retaliation, a fraught process.<sup>6</sup> There is also the low cost of creating cyber weapons—code is cheap—and any weapon released onto the Internet can be modified to create the basis of new offensive capabilities.<sup>7</sup> All of this means that the battlespace is open, accessible, nearly



anonymous, and with an entry cost that appears affordable to any nation-state.

Strategies that rely too heavily on offensive dominance in cyber warfare may, however, be premature. Cyber dependence—the extent to which an attacker depends on cyberspace for critical infrastructure—is crucial to the strategic advantages that cyber weapons can provide. Uncertainty rules as the dual-use nature of cyber weapons allows them to be captured, manipulated, and turned against their creators.<sup>8</sup> Equally important is the practice of “escalation dominance.”<sup>9</sup> As shown by as yet untested U.S. policy, retaliation for a cyber attack may be delivered by more destructive military capabilities.<sup>10</sup> And while the speed of a cyber attack may be near instantaneous, preparation for sophisticated cyber attacks is considerable. The Stuxnet attack required the resources of a technologically sophisticated state to provide the expansive espionage, industrial testing, and clandestine delivery that were so vital to its success. The above demonstrates that the true cost of advanced cyber weapons lies not in their creation but in their targeting and deployment, both of which reduce their ability to be redeployed to face future, unforeseen threats.

Cyber weapons are further limited by their lack of physicality. As pieces of computer code, they generate military effect only by exploiting vulnerabilities created by reliance on cyberspace.<sup>11</sup> They can attack vulnerable platforms and infrastructures by manipulating computer systems or act as a force multiplier to traditional military assets. This may lead to the disruption and control of the battlespace, as well as to the provision of additional intelligence when payloads are deployed. These effects, however, are always secondary—cyber weapons cannot directly affect the battlefield without a device to act through, nor can they occupy and control territory.

Ultimately, the debate regarding the balance of power in cyber warfare and the relative power of cyber weapons will likely be decided by empirical evidence relating to two factors. The first is the amount of damage caused by the compromise of cyber-dependent platforms. The second will

be the extent to which major disruptions to infrastructure erode political willpower and are exploitable by conventional military capabilities. For the moment, however, it is safe to presume that conflicts will not be won in cyberspace alone and that this applies as much to small states as it does to major powers.

### Uses of Cyber Weapons by Small States

To be worthy of investment, a cyber weapons arsenal must provide states with political or military advantage over—or at the very least, parity with—their adversaries. To judge whether a small state benefits sufficiently to justify their acquisition, we must understand how these capabilities can be used. A nonexhaustive list of potential cyber weapon uses includes *warfighting*, *coercion*, *deterrence*, and *defense diplomacy*. As cyber weapons are limited to secondary effects, they currently have restricted uses in warfighting. Their most prominent effect likely will be the disruption and/or manipulation of military command, control, communications, computers, intelligence, surveillance, and reconnaissance (C4ISR) capabilities and the degradation of civilian support networks. Attacks on civilian infrastructure remain most feasible, and attacks on automated military platforms are possible.<sup>12</sup> The effective use of cyber weapons as a coercive tool is constrained by the relative size and cyber dependence of an opponent and carries the risk of weapons acting in unforeseen ways. Both of these dependencies are shared when cyber weapons are used as a deterrent. This is due to the peculiar nature of the cyber domain, where both coercion and deterrence rely on the same aggressive forward reconnaissance of an adversary’s network. This results in the difference between coercion and deterrence being reduced to intent—something difficult to prove. The final potential use of cyber weapons is as a component of defense diplomacy strategy, which focuses on joint interstate military exercises as a means to dispel hostility, build trust, and develop armed forces.<sup>13</sup> This could be expanded to

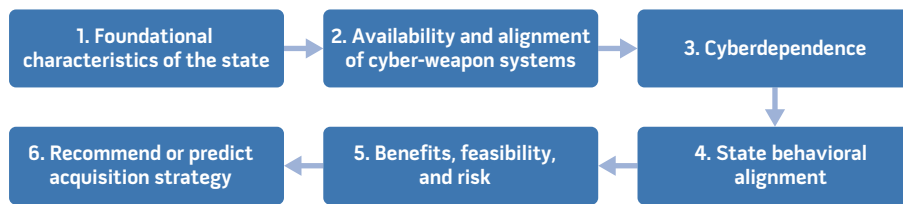
encompass cyber exercises conducted by military cyber specialists. Defense diplomacy can act as a deterrent, but it is effective only if relevant military capabilities are both credible and demonstrable.<sup>14</sup> The latter is problematic. Advanced cyber weapons are highly classified; caution must therefore be exercised when demonstrating capabilities so that “live” network penetrations are not divulged.

These four capabilities have crucial dependencies, all of which can limit their suitability for deployment in a conflict. First, the conflicting parties must have comparable military power. Disrupting an opponent’s C4ISR will be of little consequence if they still enjoy considerable conventional military superiority despite the successful deployment of cyber weapons. Second, as demonstrated by the principle of cyber dependence, one state’s disruption of another’s cyber infrastructure is effective only if they can defend their own cyber assets or possess the capability to act without these assets with minimal degradation in operational effectiveness. Third, states must have the resources and expertise required to deploy cyber weapons, which increase commensurate with their efficacy. Fourth, cyber weapons rely on aggressive forward reconnaissance into networks of potential adversaries; weapons should be positioned before conflict begins. This creates political and military risk if an opponent discovers and traces a dormant cyber weapon. Finally, all use of cyber weapons is complicated by their inherent unpredictability, which casts doubts over weapon precision and effect. Once unleashed, the course of cyber weapons may be difficult to predict and/or contain.<sup>15</sup> Unforeseen results may undermine relationships or spread to neutral states that then take retaliatory action.<sup>16</sup> Accordingly, weapon deployment must follow sound strategy against clearly identified adversaries to minimize unforeseen consequences.

### A Predictive Framework

What is offered in this section is an analytical framework that may provide a customized evaluation of whether a

**Figure. Cyber Weapon Acquisition Framework**



particular small state should—or will—acquire cyber weapons. In essence, what is being provided is a baseline for a comparative, comprehensive study on a state-by-state basis. The framework itself yields its maximum value when numerous states have been analyzed. This enables potential proliferation patterns to emerge and a clearer picture of the threat landscape to present itself. The outline of the basic process for analysis is provided in the figure.

Each step is explained by a purpose statement and demonstrated through a case study. The subject of the case study is New Zealand, chosen due to its membership in the Five Eyes intelligence network and because it both self-identifies as and is widely perceived to be a small state.<sup>17</sup> Ideally, each step of the framework would be completed by a group representing a variety of perspectives from military forces, government entities, and academic specialties. There is the potential for a much more detailed evaluation than that presented, which has been condensed for brevity.

**Step One: Identify Foundational Small-State Characteristics.** The purpose is to identify key characteristics of the small state within three categories: quantitative, behavioral, and identity.<sup>18</sup> *Quantitative* refers to measures such as land area, population, and gross domestic product (GDP). *Behavioral* refers to qualitative metrics concerning the behavior of a state, both domestically and within the international system. *Identity* refers to qualitative metrics that focus on how a state perceives its own identity. This article proposes that metrics from each category can be freely used by suitably informed analysts to assign a size category to any particular state. This avoids the need for a final definition

of a *small state*. Instead, definition and categorization are achieved through possession of a sufficient number of overlapping characteristics—some quantitative, some behavioral, and some identity based.<sup>19</sup> Quantitatively, New Zealand has a small population (approximately 4.5 million), a small GDP (approximately \$197 billion), and a small land area.<sup>20</sup> It is geographically isolated, bordering no other countries. In the realm of behavior, New Zealand practices an institutionally focused multilateral foreign policy. It is a founding member of the United Nations and was elected to the Security Council for the 2015–2016 term after running on a platform of advocating for other small states. It participates in multiple alliances and takes a special interest in the security of the South Pacific.<sup>21</sup> Regarding identity, New Zealand’s self-identity emphasizes the values of fairness, independence, nonaggression, cooperation, and acknowledgment of its status as a small state.<sup>22</sup> Its security identity is driven by a lack of perceived threat that allows New Zealand to make security decisions based on principle rather than practicality.<sup>23</sup> This was demonstrated by the banning of nuclear-armed and nuclear-powered ships within New Zealand waters, and its subsequent informal exclusion from aspects of the Australia, New Zealand, and United States Security Treaty. Despite reduced security, however, domestic opinion strongly supported the anti-nuclear policy that, along with support for nonproliferation and disarmament, has strengthened the pacifistic elements of New Zealand’s national identity.<sup>24</sup>

**Step Two: Identify Resource Availability and Policy Alignment for Cyber Weapon Development, Deployment, and Exploitation.** The purpose is to identify how the use of

cyber weapons would align with current security and defense policies; whether the small state has the military capabilities to exploit vulnerabilities caused by cyber weapon deployment; and whether the small state has the intelligence and technical resources needed to target, develop, and deploy cyber weapons.

In key New Zealand defense documents, references to cyber primarily mention defense against cyber attacks, with only two references to the application of military force to cyberspace. There is no mention of cyber weapon acquisition. New Zealand’s defense policy has focused on military contributions to a secure New Zealand, a rules-based international order, and a sound global economy. Because the likelihood of direct threats against the country and its closest allies is low, there has been a focus on peacekeeping, disaster relief, affordability, and maritime patrol. New Zealand’s military is small (11,500 personnel, including reservists) with limited offensive capabilities and low funding (just 1.1 percent of GDP). Accordingly, the New Zealand military lacks the ability to exploit vulnerabilities caused by the successful use of cyber weapons.

New Zealand is a member of the Five Eyes intelligence network and thus can access more sophisticated intelligence than most small states. This can be used to increase its ability to target and deploy cyber weapons. It has a modern signals intelligence capability, housed by the civilian Government Communications Security Bureau, which also has responsibility for national cybersecurity. It most likely has the technical capability to adapt existing cyber weapons or develop new ones, particularly if aided by its allies. Due to fiscal constraints, however, any additional funding for cyber weapons will likely have to come from the existing defense budget and thus result in compromises to other capabilities.<sup>25</sup>

**Step Three: Examine Small-State Cyber Dependence.** The purpose is to examine the small state’s reliance on cyberspace for its military capabilities and critical infrastructure, as well as its relative cyber dependence when compared to potential geopolitical adversaries.





When submerged, *Los Angeles*-class fast attack submarine USS *Santa Fe* is among world's stealthiest platforms, capable of supporting missions including anti-submarine warfare, anti-surface ship warfare, strike, naval special warfare involving special operations forces, and intelligence, surveillance, and reconnaissance, August 8, 2013 (U.S. Navy/Sebastian McCormack)

New Zealand has moderate to high cyber dependence, with increasing reliance on online services and platforms by the government, business sector, and civil society. This dependence will increase. For example, the acquisition of new C4ISR capabilities to increase military adoption of network-centric warfare principles would create new vulnerabilities.<sup>26</sup> New Zealand's cyber dependence is further increased by limited cybersecurity expertise.<sup>27</sup> It does not have obvious military opponents, so its relative level of cyber dependence is difficult to calculate.

**Step Four: Analyze State Behavior Against Competing Security Models.** The purpose is to analyze how state behavior aligns with each competing security model and how cyber weapon acquisition and use may support or detract from this behavior. Cyber weapon arsenals are used to advance political and military

objectives. These objectives depend on a state's behavior and identity, both of which are difficult to quantify. A degree of quantification is possible, however, through the use of conceptual security models. A synthesis of recent small-state security scholarship generates four models: the first focused on alliances, the second on international cooperation, and the third and fourth on identity, differentiated by competing focuses (collaboration and influence, and defensive autonomy).<sup>28</sup> The alliance-focused model presents small states with persuasive reasons to acquire cyber weapons. This applies both to balancing behavior (that is, joining an alliance against a threatening state) and bandwagoning (that is, entering into an alliance with a threatening state).<sup>29</sup> The additional military resources provided by an alliance present greater opportunities for the exploitation

of vulnerabilities caused by cyber weapons. In the event that a cyber weapon unwittingly targets a powerful third party, a small state may be less likely to be subjected to blowback if it is shielded by a strong alliance. Furthermore, cyber weapons may be a reasonably cost-effective contribution to an alliance; a great power could even provide preferential procurement opportunities for a favored ally.

New Zealand maintains a close military alliance with Australia and is a member of the Five Power Defence Arrangements. It also has recently signed cybersecurity agreements with the North Atlantic Treaty Organization and United Kingdom.<sup>30</sup> The alliances above have focused on security and mutual defense rather than offensive capabilities. New Zealand does, however, have a policy of complementing Australian defense capabilities.<sup>31</sup> This could be achieved through

**Table 1. Cyber Weapon Cost-Benefit Risk Matrix for New Zealand**

	Warfighting	Coercion	Deterrence	Defense Diplomacy
<b>Benefits</b>	Ability to complement military capabilities of allies Cost effective offensive capability	Limited coercive ability from cyber weapons	Limited deterrence from cyber weapons	Deterrence from demonstrating effective cyber weapons via defense diplomacy
<b>Feasibility</b>	Allies may provide favorable procurement opportunities Appropriate technical and intelligence resources exist	Appropriate technical and intelligence resources exist	Appropriate technical and intelligence resources exist	Appropriate technical and intelligence resources exist
<b>Risks</b>	Procurement may result in reduced funding for other military capabilities Domestic opposition to acquisition of new offensive weapons Cyber weapon acquisition may reduce international reputation Cyber weapons exploitation relies on allied forces High level of cyber dependence increases vulnerability to retaliation	Domestic opposition to acquisition of new offensive weapons Security identity not reconcilable with coercive military actions Procurement may result in reduced funding for other military capabilities Cyber weapon acquisition may reduce international reputation High level of cyber dependence increases vulnerability to retaliation	Procurement may result in reduced funding for other military capabilities Cyber weapon acquisition may reduce international reputation High level of cyber dependence increases vulnerability to retaliation Lack of identified threats reduces ability to target and develop deterrent cyber weapons	Procurement may result in reduced funding for other military capabilities Cyber weapon acquisition may reduce international reputation High level of cyber dependence reduces deterrent effect

the acquisition of cyber weapons, so long as it was closely coordinated and integrated with the Australian military. Thus this model assesses state behavioral alignment as medium/high and cyber weapon support as medium/high.

The international cooperation model assumes that small states can exert influence by strengthening international organizations, encouraging cooperative approaches to security, and creating laws and norms to constrain powerful states.<sup>32</sup> Small states acting under this model will favor diplomatic and ideological methods of influence. As such, they are less likely to acquire cyber weapons. Instead, it is more likely that they will try to regulate cyber weapons in a manner similar to the restrictions on biological and chemical weapons or by leading efforts to explicitly

incorporate them into the international laws of warfare.

New Zealand usually pursues a multilateral foreign policy approach and is a member of multiple international organizations. It has a long history of championing disarmament and arms control, which conflicts with the acquisition of new categories of offensive weapons. This model assesses state behavioral alignment as high and cyber weapon support as low.

Both of the identity focused models (collaboration and influence versus defensive autonomy) are centered on analysis of a small state’s “security identity.” This develops from perceptions of “past behavior and images and myths linked to it which have been internalized over long periods of time by the political

elite and population of the state.”<sup>33</sup> This identity can be based around a number of disparate factors such as ongoing security threats, perceptions of national character, and historical consciousness. A state’s security identity can lead it toward a preference for either of the identity focused security models mentioned above. Regarding collaboration and influence, New Zealand’s identity strikes a balance between practicality and principle. It strives to be a moral, fair-minded state that advances what it regards as important values, such as human rights and the rule of law.<sup>34</sup> It still wishes, however, to work in a constructive manner that allows it to contribute practical solutions to difficult problems. The acquisition of cyber weapons is unlikely to advance this model. Thus this model assesses state behavioral alignment as medium and cyber weapon support as low.

Despite its multilateral behavior, New Zealand retains some defensive autonomy and takes pride in maintaining independent views on major issues.<sup>35</sup> Its isolation and lack of major threats have allowed it to retain a measure of autonomy in its defense policy and to maintain a small military. Its independent and pacifistic nature suggests that cyber weapon acquisition could be controversial. Thus this model assesses state behavioral alignment as medium and cyber weapon support as low/medium.

*Step Five: Analyze Benefits, Feasibility, and Risk for Each Category of Cyber Weapon Use.* The purpose is to first identify the benefits, feasibility, and risk of acquiring cyber weapons based on each category of potential use, as shown in table 1. Next this information is analyzed against the degree to which cyber weapon use may support different security models, as shown in table 2.

This results in a ranking of the benefits, feasibility, and risk of each combination of cyber weapon use and small-state security model. This is followed by an overall recommendation or prediction for cyber weapon acquisition under each security model and category of cyber weapon use.

*Step Six: Recommend or Predict Cyber Weapon Acquisition Strategy.* The purpose is to summarize key findings, to



**Table 2. Cyber Weapon Acquisition Matrix for New Zealand**

Security Model	BFR	Warfighting	Coercion	Deterrence	Defense Diplomacy	Overall
Alliances	Benefits	Medium	Low	Low	Medium	Medium
	Feasibility	Medium	Medium	Medium	Medium	Medium
	Risk	High	Very High	High	Low	High
	Recommendation/ Prediction	Further Investigation	No	No	Further Investigation	Further Investigation
International cooperation	Benefits	Low	Low	Low	Medium	Low
	Feasibility	Medium	Medium	Medium	Medium	Medium
	Risk	High	High	High	Low	High
	Recommendation/ Prediction	No	No	No	Further Investigation	No
Identity and norms: collaboration and influence	Benefits	Low	Low	Low	Medium	Low
	Feasibility	Medium	Medium	Medium	Medium	Medium
	Risk	High	High	High	Low	High
	Recommendation/ Prediction	No	No	No	Further Investigation	No
Identity and norms: defensive autonomy	Benefits	Low	Low	Low	Low	Low
	Feasibility	Medium	Medium	Medium	Medium	Medium
	Risk	High	High	High	Low	Low
	Recommendation/ Prediction	No	No	No	No	No

recommend whether a small state should acquire cyber weapons, and to predict the likelihood of such an acquisition. The key findings are that New Zealand is unlikely to gain significant benefits from the acquisition of cyber weapons. This is due to its limited military capabilities, multilateral foreign approach, extensive participation in international organizations, and pacifistic security identity. Factors that could change this evaluation and increase the benefits of cyber weapon acquisition would include an increased focus on military alliances, the emergence of more obvious threats to New Zealand or its close allies, or a changing security identity.

Therefore, the recommendation/prediction is that New Zealand should not acquire cyber weapons at this time and is unlikely to do so. The framework's output has considerable utility as a decision support tool. When used by a small state as an input into a strategic decisionmaking process, its output can be incorporated into relevant defense capability and policy documents. If cyber weapon acquisition is recommended, its output could be further used to inform specific strategic, doctrinal, and planning documents. It

also provides a basis for potential cyber weapon capabilities to be analyzed under a standard return-on-investment procurement model. This would involve a more detailed analysis of benefits, costs, and risks that would allow fit-for-purpose procurement decisions to be made in a fiscally and operationally prudent manner.

Alternatively, the framework, which is low cost and allows a variety of actors to determine the likelihood of cyber weapon acquisition by small states, could be used as a tool to develop predictive intelligence. Furthermore, when the framework is used on a sufficient number of small states, it could be used as a basis for making broader predictions regarding the proliferation of cyber weapons. This would be particularly effective over geographical areas with a large concentration of small states. For more powerful states, this might indicate opportunities for increased cyber warfare cooperation with geopolitical allies, perhaps even extending to arms sales or defense diplomacy. Conversely, the framework could provide nongovernmental organizations and academics with opportunities to trace cyber weapon proliferation and raise visibility of the phenomenon among international

organizations, policymakers, and the general public. These outcomes provide significant benefits to the broad spectrum of actors seeking stability and influence within the international order.

### Conclusion

The evolution of the various domains of warfare did not occur overnight. Learning from and leveraging the changing landscapes of war required continuous investigation, reflection, and formative activities to achieve parity, much less dominance, with rivals. Treating cyberspace as the fifth domain of warfare requires a greater understanding of the battlespace than currently exists. This goes well beyond the technological aspects and requires the integration of cyber capabilities and strategies into existing defense doctrines. The framework we have developed has the potential to help guide this process, from strategic decision to procurement and doctrinal and operational integration. Similarly, its predictive potential is significant—any ability to forecast cyber weapon acquisition on a state-by-state basis and thus monitor cyber weapon proliferation would be of substantial

geopolitical benefit. We further propose that decisionmakers of large, powerful states must not ignore the strategic impact that small states could have in this domain. We also remind small states that their geopolitical rivals may deploy cyber weapons as a means to advance national interests in this sphere of influence. Therefore, it is our hope that, as a result of clarifying the potential conflict space, future policies might be developed to control the proliferation of cyber weapons. JFQ

## Notes

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<sup>26</sup> *New Zealand Defence Force Doctrine*.

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<sup>28</sup> Ibid.; Paul Sutton, "The Concept of Small States in the International Political Economy," *The Round Table* 100, no. 413 (2011), 141–153.

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<sup>32</sup> Ibid.

<sup>33</sup> Rickli, 307–325.

<sup>34</sup> McLay.

<sup>35</sup> Ibid.



President Obama talks with President Lee Myung-bak of South Korea in Treaty Room Office in Residence of White House, November 23, 2010, after North Korea conducted artillery attack against South Korean island of Yeonpyeong (White House/Pete Souza)



# The Danger of False Peril

## Avoiding Threat Inflation

By Andrew Stigler

As his advisors deliberated during the Cuban Missile Crisis, President John F. Kennedy believed that the chance of war with the Soviet Union was “between one in three and even.” Even if the President’s estimation was overly pessimistic, the fact that a leader would choose to initiate a crisis while believing there was such a high risk of a nuclear exchange is a most sobering thought. Some estimated that the number of dead resulting from a nuclear exchange between the

superpowers could have exceeded 200 million people.<sup>1</sup>

But how serious was the threat that Kennedy was responding to? The Soviet Union sought to impose some small measure of vulnerability on the United States, just a fraction of the nuclear striking capability that the North Atlantic Treaty Organization possessed. Though most Americans feared Soviet advances in nuclear strike capability—even Kennedy wondered if inaction would lead to his own impeachment—the later

history of the superpower confrontation strongly suggests that the United States could have tolerated Soviet offensive missiles in Cuba. Over the course of the Cold War, the Soviet nuclear arsenal grew over tenfold. In 1986, the Soviet Union possessed approximately 45,000 warheads, up from 3,322 at the time of the Cuba crisis.<sup>2</sup> During these later Cold War years, the Soviets had an ability to engage in a nuclear attack on the United States that vastly exceeded the capability they planned to place in Cuba in 1962. Yet we made it through, strongly suggesting Kennedy’s alarmism was misplaced.

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Secretary of State John Kerry speaks with Hossein Fereydoun, brother of Iranian President Hassan Rouhani, and Iranian Foreign Minister Javad Zarif before announcing historic nuclear agreement to reporters in Vienna, Austria (State Department)

The Cuban Missile Crisis is often heralded as a successful combination of brinkmanship and negotiation. But the later history of the Cold War calls into serious question whether President Kennedy (and other leading politicians) exaggerated the threat posed by Soviet weapons in Cuba. If Kennedy unnecessarily courted a nuclear exchange with the Soviets, then the crisis potentially represents the single greatest unnecessary risk in American history.

This example highlights, in the starkest terms, how the task of designing national security policy is heavily weighted toward the end of detecting threats as early as possible. Nations aim to either neutralize threats, or at least to prepare as best as possible for a future confrontation. When wars occur, we ask ourselves if earlier action would have avoided the conflict, or at least reduced its cost. But phrasing policy choices in such terms can lead to avoidable violence. President Lyndon Johnson referenced the specter of Adolf Hitler to convince the Nation

that America needed to commit itself to the Vietnam conflict in order to avoid the spread of communism in the region.<sup>3</sup> Yet when South Vietnam fell in 1975, in spite of years of American effort and sacrifice to avoid such an outcome, the regional dominoes did fall as Johnson had feared.

The task of avoiding unnecessary confrontations is a critical aspect of sound policymaking that receives too little attention. When a nation avoids the trap of threat exaggeration, this leads to a “quiet success.” Such successes, however, do not lead to banner headlines or celebrations in Times Square. Conflict is avoided, and historians and pundits move on, writing their essays on the disasters that did occur rather than a potential catastrophe that was avoided.

As military officers advance in their careers, it becomes increasingly likely that they will be assigned tours of duty that will involve broader responsibilities, including threat assessment. This is one of the reasons why promotable O-4s and O-5s are required to have been assigned

to a certain number of joint billets. Yet officers being prepared for advancement receive little of the methodological training that would best equip them to address this complicated task.

This article attempts to offer a structured approach to this underappreciated aspect of national security threat assessment. Given that a majority of what is written on national security seeks to advocate confrontational approaches to nascent threats, this article deliberately addresses the issue with a countervailing bias. It explores potential reasons to be dubious of threats and examines approaches and perspectives that could potentially reveal inadvertent threat exaggeration.

What follows are a series of questions that could be employed to engage in something similar to a systematic effort to turn a skeptical eye on alarmist assessments. The term *opposing state* is used to refer to the *state of concern*—a nation whose actions, history, character, or leadership have led some in the United States to conclude that it poses a future

national security threat. While imperfect to be sure, this approach could help bring to the fore underappreciated or ignored reasons to downplay a threat and offer an opportunity for calmer heads to prevail.

### **Will the Opposing State Actually Take Aggressive Action?**

Gauging the possibility that an opposing state will avoid offensive action is half the threat equation. Threat assessments tend to focus on national leaders' provocative statements that suggest a belligerent attitude—and, to an extent, rightly so. But reflecting on such statements in and of themselves is not the same as threat assessment. North Korea has been pilloried for decades as among the most dangerous and untrustworthy nations in the world. But despite the dire predictions of American security experts over many decades, the peninsula has been free of large-scale conflict since 1953.

Even substate groups can show state-like restraint. At the conclusion of its 2006 conflict with Israel, for instance, Hizballah demonstrated that its missile stocks had survived the month-long war. The day before the ceasefire took effect, Hizballah launched 246 rockets into Israel—the largest number that it had fired during the course of combat. Yet Hizballah ceased offensive operations on the same day the Israelis did, and has largely refrained from aggressive actions since August 2006. Hizballah's restraint does not make it a neighborly organization, but it does suggest an example of how even groups labeled as terrorist organizations are not all reflexively hyper-aggressive.

As a mental exercise, we might put ourselves in the position of “making the case” that the opposing state does not harbor genuine aggressive intentions. What evidence would we cite? Using Iran as an example, we could point to the fact that Tehran has not initiated any wars since the 1979 revolution. In addition, Iran has been restrained in the face of provocation in the recent past, and it is important to assess the actions that have *not* been taken as well.

### **Does the Opposing State Have Other Concerns?**

Even if a plausible case could be made that the threatening state has malign intent, there may be mitigating factors that could reduce the level of concern. An opposing state that is dealing with dangers and concerns of its own might be less of a threat. Economic difficulties, social unrest, or political instability are factors that could keep the state in question from taking the initiative on a revisionist foreign policy agenda. At the same time, this consideration could cut both ways; any of the factors listed could lead the opposing state to be more conflict prone in hopes of alleviating domestic concerns or the like.

Consider China, a country that is engaging in a military modernization of considerable scope. Deputy Undersecretary of Defense for Acquisition, Technology, and Logistics Frank Kendall argued in 2014 that America's military edge is being “challenged in ways that I have not seen for decades.”<sup>4</sup> For China, however, as for most countries, fostering economic growth is a priority. A conflict of any scope between China and the United States would be certain to cause tremendous turmoil in international markets. As of this writing, China's currency devaluations signal significant concerns among party elites that unusual measures are necessary to sustain the trajectory of China's economy.

### **Does the Opposing State Have Reason to Fear the United States?**

In 1978, Robert Jervis argued that states in the international system face what could be called a “security dilemma.”<sup>5</sup> Increases in military spending that are intended for defensive purposes may be perceived by others as a dangerous and threatening offensive arms buildup. The second state then enhances its own defenses, which is seen by the first state as a threat and evidence of the malign intent of the second state. Few weapons systems are purely defensive in nature. Even President Ronald Reagan's “Star Wars” missile defense system, a purely

defensive system, was feared by Mikhail Gorbachev out of a concern that it would allow the United States to engage in an offensive strike on the Soviet Union. Since most arms buildups enhance both offensive and defensive capabilities, states that seek only to protect themselves can be caught in a cycle of unnecessary military preparations.

The fact that an opposing state sees the United States as the aggressive party should not, in and of itself, be cause for revising our assessment of the right course of action. A state motivated to attack America for misguided reasons could still pose a threat, and preemptive action could still be warranted. The main reason to be alert to the possibility that the opposing state perceives the United States as the aggressive party is to potentially identify opportunities to reduce the environment of mutual fear. If a state's fears could be reduced via diplomatic signals or some other credible communication of neutral intent, this is usually preferable to a conflict.

### **Are There Political Pressures on the Opposing State to Make Threatening Statements?**

Even powerful states that sense no imminent threat and harbor no intention of taking action sometimes make threatening statements for political or strategic reasons. America is no exception. Despite the fact that the United States enjoys a geostrategic position that is the envy of the world, American leaders are often influenced by political incentives to play the tough guy. Phrases such as “all options are on the table” have become rhetorical boilerplate in the United States to the point where it is easy to forget such statements could be perceived as threats to strike militarily. In the early 1980s, President Reagan's anti-Soviet rhetoric about the “evil empire” and exercises such as Able Archer led Soviet leaders to genuinely fear American aggression, even a possible nuclear surprise attack.<sup>6</sup>

Other countries, given reason to be nervous of the United States or other regional powers, could compel their leaders to engage in “tough guy” posturing. When Soviet General Secretary





President Obama delivers first major speech stating commitment to seek peace and security of world without nuclear weapons in front of thousands in Prague, Czech Republic, April 5, 2009 (White House/Pete Souza)

Nikita Khrushchev warned Western diplomats in 1956 when he said, “We will bury you,” his audience may have been the Soviet Politburo, and not American policymakers.<sup>7</sup> At the same time, posturing could lead to a sense of commitment that could promote actual aggression. But threats should not be reflexively taken as indications of true malign intent, since other, less threatening explanations are possible as well.

### Even if Conflict Occurs, How Likely Are Worst-Case Outcomes?

While dire scenarios must be considered in national security deliberations, it is also essential to coldly assess the probability of such scenarios before determining a course of action. A likely current example of casual worst-case scenario thinking is America’s concern over nuclear proliferation. Since 1945, pessimists have predicted the inexorable

swelling of the ranks of nuclear weapons states. President Kennedy predicted there could be “ten, fifteen, twenty” nuclear states by 1964.<sup>8</sup> Such predictions have not come to pass, even half a century after Kennedy’s prediction.

Even the mere repetition of a threat could increase the public’s assumptions about the capabilities of an adversary. Prior to the invasion of Iraq in 2003, the George W. Bush administration suggested the possibility that Saddam Hussein was generating a program to develop weapons of mass destruction (WMD). Yet by the time of the invasion, a majority of Americans believed that Iraq actually possessed WMD.<sup>9</sup> Images of mushroom clouds are easily summoned yet hard to dispel.

While nation-states can be deterred, terrorist groups are understandably viewed as far less susceptible to deterrent threats. But how likely is it that such a group would acquire even one of the

world’s most dangerous weapons? We can all but rule out the possibility that even a state-supported terrorist organization could independently develop even a crude nuclear weapon. John Mueller examines the 20 steps required to produce a nuclear weapon *de novo*, and failure or detection at even 1 of these 20 stages defeats the entire enterprise.<sup>10</sup>

Recent research suggests that states with nuclear weapons are extremely unlikely to hand those weapons over to terrorist groups. Why would states undertake very expensive nuclear weapons programs, endure the political and economic costs of defying the international community, and then hand one of their limited stock of weapons to a stateless organization? From this perspective, it is an odd notion. Kier Lieber and Daryl Press argue that states will not undertake the “mind-bogglingly dangerous” approach of handing it to an unaffiliated group.<sup>11</sup> They also point out that the vast majority of state-sponsored

terrorism has been eventually attributed to the sponsor, raising the near certainty that the originating state would be subjected to cataclysmic retaliation.

### How Imminent Is the Need to Respond to the Threat?

A wait-and-see approach could be a rational course of action. Does the situation offer latitude to respond when the threat becomes more concrete, or even after the threat has been realized? For example, in the early stages of the Cold War there was some talk of engaging in preemptive action before the Soviet Union and China developed nuclear weapons. Major General Orvil Anderson, USAF, stated, “Give me the order to do it, and I can break up Russia’s five A-bomb nests in a week.”<sup>12</sup> President Kennedy considered preemptive strikes on China, perhaps using “anonymous planes.”<sup>13</sup> But history’s verdict is clearly in favor of those who resisted calls for dramatic action against these emerging nuclear powers. We might prefer a world with fewer nuclear weapons today, but most people sleep soundly today in spite of the Russian and Chinese nuclear arsenals.

Adopting a wait-and-see approach is a politically awkward topic. No commander in chief relishes the idea of explaining after an attack why advance indication was available but action was not taken. At the same time, from a strategic standpoint, it is a perspective that must be considered, particularly for a country with the vast security resources that the United States possesses. And flashpoints could endure for long periods of time without leading to violence. As David Kang points out, many security analysts have claimed to identify powder kegs in Asia—the Korean Peninsula in particular—while those kegs have failed to ignite a conflict over the course of years, sometimes decades.<sup>14</sup>

### Could Preemptive Action Against the Opposing State Make a Bad Situation Worse?

We should also consider if a confrontation, instead of delaying or obviating a perceived threat, might create a more dangerous environment. This

consideration was prominently voiced during the 2015 debate over the Joint Comprehensive Plan of Action nuclear agreement with Iran. President Barack Obama has stated that a military strike against Iran would only delay its program, while driving it “deeper underground” and “destroy[ing] the international unity [behind efforts to forestall Iran’s nuclear program] that we’ve spent so many years building.”<sup>15</sup>

The Islamic State of Iraq and the Levant (ISIL) offers a similar confirming example of how preemptive action can lead to the rise of greater threats. The United States invaded Iraq in 2003 to eliminate the danger posed by Saddam’s regime. Yet it was this preemptive action that was the primary cause in the rise of a number of terrorist groups in the region, including ISIL.<sup>16</sup> The tyranny of unintended consequences has been the undoing of countless national security initiatives. Efforts to address short-term concerns can lead to long-term repercussions.

What follows is an attempt to address the spectrum of factors that could be applicable when skeptically assessing the threat posed by an opposing state. They are presented in sequence: gauging intent, assessing the opposing state’s ability to act aggressively, evaluating the spectrum of possible responses after any attack by the opposing state, and exploring the possible repercussions of unnecessary action. No answer to any of these questions should reflexively trigger a downgrade of the threat. They are, instead, considerations that should influence a threat assessment but that are, at times, overlooked. To reiterate, the *opposing state* refers to the state that may or may not pose a threat, while the *target* is the state that might have cause to fear an attack of some kind from the opposing state.

## Threat Assessment

### I. Gauging Opposing State’s Intent

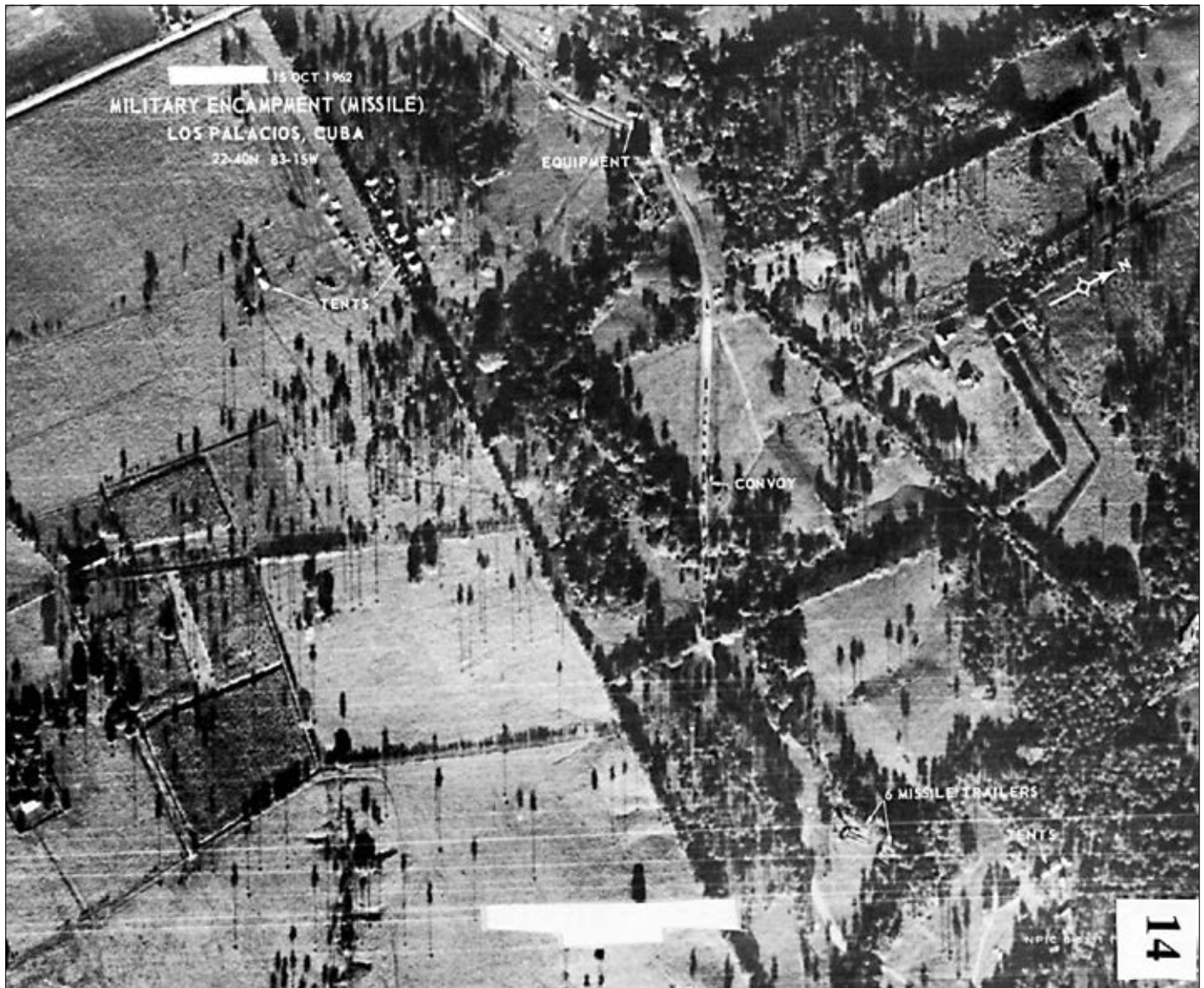
- A. Indications of Aggressive Intent
  - 1. Result of confused signals?
  - 2. Opposing state posturing
    - a. for domestic audience
    - b. for international audience

- 3. Observer’s bias overemphasizing malign signals?
- 4. Fractured government authority in opposing state dilutes importance of statements?
  - a. divided leadership
  - b. military veto/civilian veto over any action
- 5. Translation issues? Signal context?
- B. Cause of Aggressive Intent
  - 1. Fear of the United States?
  - 2. Domestic political pressure?
  - 3. Political competition leading to increased nationalism?
  - 4. Recent political setback?
  - 5. Alliance dynamics?
  - 6. Economic difficulties?
- C. Depth of Aggressive Intent
  - 1. Opposing state has marginal or limited willingness to bear costs?
  - 2. Future political events (such as elections) on the horizon?
  - 3. Opposing state recognizes its vulnerability to retaliation?
  - 4. Opposing state recognizes/fears potential for attack to fail?

### II. Gauging Opposing State’s Ability to Act

- A. Means to Act
  - 1. Limited military means? Uncertain means?
  - 2. Untested strategy/tactics?
  - 3. Lack of opportunity for surprise?
  - 4. Limited opportunity to act/close window of opportunity?
- B. Obstacles to Action
  - 1. Dependent on allies?
    - a. U.S. leverage on allies *ex ante*?
    - b. U.S. ability to punish allies *ex post*?
  - 2. Fractured system of government?
  - 3. Long mobilization time/unavoidable warning of preparations for attack?
- C. Likely Impact of Action
  - 1. Are anticipated attacks likely to be limited?
  - 2. Could target easily absorb likely attacks?





This image, taken by Major Richard "Steve" Heyser in U.S. Air Force U-2, shows Soviet truck convoy deploying missiles near San Cristobal, Cuba, proving Russian missiles were being emplaced in Cuba, October 14, 1962 (U.S. Air Force)

3. Consequences of attack compared to costs of preemption?

### III. *Target's Ability to Preempt or Deter*

- A. What are the costs associated with preempting the threat?
- B. Repercussions of preemption for target state:
  - 1. What are repercussions of preemptive action over short/medium/long term?
  - 2. Would preemptive action increase likelihood of worst-case scenarios?
  - 3. Is there a risk that preemptive action would distract the target from other threats?

- 4. Would preemptive action damage the target's reputation?
- 5. Are there domestic political costs of preemptive action?
- 6. Would other states see opportunities following preemptive action by the target?
- C. Are there opportunities to deter the opposing state, via political/military/economic actions or threatened actions?

### IV. *Target's Ability to Respond*

- A. Ability to Limit Damage
- B. Ability to Retaliate

### **Conclusion: Primum Non Nocere**

"First, do no harm." This is the mantra instilled in aspiring doctors during medical school, the concept that we must not make an unfortunate situation worse by resorting to avoidable actions. National security policy should take the same caveat to heart. Just as a patient complaining of excruciating pain could still be best served by a wait-and-see approach, the best option in any given national security scenario might be to take no action at all. A calm and even-handed assessment of the true scope of a perceived threat could be essential to avoiding an unwanted conflict.

Unsurprisingly, military officers could serve as a critical bulwark against unnecessary military actions. According to one account, there was pressure from the White House in early 2008 to undertake a preemptive strike against Iran's nuclear facilities in the waning days of the Bush administration. But senior military officers, including at least two combatant commanders, were opposed. Admiral William Fallon, commander of U.S. Central Command, is reported to have stated that the operations against Iran proposed by civilian leaders were, in his opinion, "very stupid" and that bombing should be avoided unless the Iranians did something considerably more reckless than they had up to that point.<sup>17</sup> Fallon's sober assessment of the threat may have prevented an unnecessary war.

It is essential not to give lip service to the notion of exhausting all other options before resorting to organized violence. With the likelihood of lives lost and destruction imposed in any preemptive military action, it is incumbent on those in power to assess all threats with a full measure of skepticism before taking action. JFQ

## Notes

<sup>1</sup> Both President John F. Kennedy's assessment and the casualty estimate are from Graham Allison, "The Cuban Missile Crisis at 50: Lessons for U.S. Policy Today," *Foreign Affairs* 91, no. 4 (July/August 2012), 11–16.

<sup>2</sup> Robert S. Norris and Hans M. Kristensen, "Global Nuclear Stockpiles, 1945–2006," *Bulletin of Atomic Scientists* 62, no. 4 (July/August 2006), 66.

<sup>3</sup> Yuen Foong Khong, *Analogies at War: Korea, Munich, Dien Bien Phu, and the Vietnam Decisions of 1965* (Princeton: Princeton University Press, 1992).

<sup>4</sup> David Alexander, "China Challenging U.S. Military Technological Edge—Pentagon Official," Reuters, January 29, 2014, available at <<http://in.reuters.com/article/2014/01/29/usa-defense-china-idINDEEA0S00B20140129>>.

<sup>5</sup> Robert Jervis, "Cooperation Under the Security Dilemma," *World Politics* 30, no. 2 (January 1978), 167–214. The term *security dilemma* was most likely coined by John H. Herz in 1951.

<sup>6</sup> See David E. Hoffman, "In 1983 'War Scare,' Soviet Leadership Feared Nuclear Sur-

prise Attack by U.S.," *Washington Post*, October 24, 2015, available at <[www.washingtonpost.com/world/national-security/in-1983-war-scare-soviet-leadership-feared-nuclear-surprise-attack-by-us/2015/10/24/15a289b4-7904-11e5-a958-d889fa561dc\\_story.html](http://www.washingtonpost.com/world/national-security/in-1983-war-scare-soviet-leadership-feared-nuclear-surprise-attack-by-us/2015/10/24/15a289b4-7904-11e5-a958-d889fa561dc_story.html)>.

<sup>7</sup> Author's conversation with Sergei Khrushchev, August 2011.

<sup>8</sup> Sidney Kraus, ed., *The Great Debates: Kennedy vs. Nixon, 1960* (Bloomington: University of Indiana Press, 1962), 394.

<sup>9</sup> Douglas C. Foyle, "Leading the Public to War? The Influence of American Public Opinion on the Bush Administration's Decision to Go to War in Iraq," *International Journal of Public Opinion Research* 16, no. 3 (Autumn 2004), 288.

<sup>10</sup> For a brief summary, see John Mueller, *The Atomic Terrorist? The Cato Institute's Nuclear Proliferation Update* (Washington, DC: Cato Institute, January 2010).

<sup>11</sup> Kier A. Lieber and Daryl G. Press, "Why States Won't Give Nuclear Weapons to Terrorists," *International Security* 38, no. 1 (Summer 2013), 104.

<sup>12</sup> Thomas M. Nichols, *Eve of Destruction: The Coming Age of Preventive War* (Philadelphia: University of Pennsylvania Press, 2008), 7.

<sup>13</sup> William Burr and Jeffrey T. Richelson, "Whether to 'Strangle the Baby in the Cradle': The United States and the Chinese Nuclear Program, 1960–64," *International Security* 23, no. 3 (Winter 2000–2001), 54.

<sup>14</sup> David C. Kang, "Getting Asia Wrong: The Need for New Analytical Frameworks," *International Security* 27, no. 4 (Spring 2003), 61–66.

<sup>15</sup> Office of the Press Secretary, The White House, "Remarks by the President on the Iran Nuclear Deal," American University, Washington, DC, August 5, 2015, available at <[www.whitehouse.gov/the-press-office/2015/08/05/remarks-president-iran-nuclear-deal](http://www.whitehouse.gov/the-press-office/2015/08/05/remarks-president-iran-nuclear-deal)>.

<sup>16</sup> Though the causal chain in the genesis of the Islamic State of Iraq and the Levant (ISIL) is a complicated one, and other factors (such as the Arab Spring and revolts in Syria and elsewhere) play a role, the Iraqi insurgency offered social impetus and opportunity. Many ISIL leaders became radicalized while in American detention centers following the invasion and established relationships that later aided ISIL's development.

<sup>17</sup> Seymour M. Hersh, "Preparing the Battlefield: The Bush Administration Steps Up Its Secret Moves Against Iran," *The New Yorker*, July 7, 2008, 61–63. Fallon stated that bombing "would happen only if the Iranians did something stupid," suggesting that he believed Iranian actions up to that point were tolerable.

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*National Security Reform and the 2016 Election*

by Christopher J. Lamb and Joseph C. Bond



Over the past 20 years, there has been a sea change in senior leader views on national security reform from

skepticism to support. Nine major studies argue the national security system cannot generate or integrate the capabilities needed to manage security problems well. The system is "broken." Yet there are major obstacles to reform. However, two key prerequisites for success are in place: galvanizing cases of unsustainable performance, and in-depth problem analysis that reveals the origins of the same. A third prerequisite is committed leadership. With that in mind, the authors identify several reasons why Presidential candidates should embrace national security reform during the 2016 campaign.



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Soldiers assigned to Bravo Company, 1<sup>st</sup> Battalion, 77<sup>th</sup> Armor Regiment, 4<sup>th</sup> Armored Brigade Combat Team, 1<sup>st</sup> Armored Division, provide security with a M109A6 Paladin prior to reconnaissance patrol during Decisive Action Rotation 14-10 at National Training Center at Fort Irwin, California, September 24, 2014 (U.S. Army/Richard W. Jones, Jr.)



# Wargaming the Third Offset Strategy

By Paul Norwood and Benjamin Jensen

At a November 2014 keynote address at the Reagan National Defense Forum, then-Secretary of Defense Chuck Hagel announced the Defense Innovation Initiative (DII) to develop “a game-changing Third Offset Strategy.”<sup>1</sup> Just as the First Offset (introduction of nuclear weapons) and the Second Offset (emer-

gence of precision strike) gave the U.S. military significant advantages, a new series of technological building blocks will sustain American military dominance.<sup>2</sup> In a December 2015 speech, Deputy Secretary of Defense Robert Work envisioned a future in which autonomous deep learning systems (artificial intelligence), human-machine

collaboration, human-assisted operations, combat teaming (robotics), and autonomous weapons will give U.S. forces a competitive advantage.<sup>3</sup>

To date, much of the Third Offset discussion has focused on technology. To support the initiative, Undersecretary of Defense for Acquisition, Technology, and Logistics Frank Kendall convened a new long-range research and development planning program. Of note, Kendall helped implement the second offset through his work on follow-on forces attack capabilities in the late 1980s. Similar to the institutional processes that drove the Second Offset Strategy, the Third Offset appears to prioritize developing and integrating revolutionary technologies that have the potential to change how actors fight wars.

New capabilities require new operating concepts. Just as carrier aviation in the 1920s benefited from the tactical- and operational-level wargames held at

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the Naval War College, the Third Offset Strategy would benefit from experimentation through a series of wargames connected to joint professional military education (JPME) and field/fleet exercises. Unlike earlier top-down efforts, this new experimentation and conceptual development campaign should harness the power of crowdsourcing and incorporate ideas from across the Services, academia, and the private sector to develop what Secretary Work refers to as “AirLand Battle 2.0.”<sup>4</sup>

This article lays out an approach for developing new joint concepts for the Third Offset Strategy. First, the article defines offsets and their importance in military theory. Next, the analysis shifts to assessing the role of wargames in developing military concepts. Finally, the article proposes a wargaming campaign to develop new joint concepts for the strategy.

### What Are Offsets?

Offsets are investments in new capabilities that maintain relative force superiority. The idea emerges from applying the classical economic concept of comparative advantage to long-term competitive defense strategies. Offsets match strengths to weaknesses. Put simply, you want to find an investment that maximizes your strengths and efficiencies while offsetting those of an opponent. For example, according to former Secretary of Defense Harold Brown, one of the architects of the second offset, “if the United States looks for comparative advantages against a potential Soviet adversary with superior numbers of forces, one of the most obvious is the relatively lower cost of incorporating high technology into U.S. military equipment.”<sup>5</sup>

Through the DII, the Third Offset seeks “specific investments in promising new technologies and capabilities such as high-speed strike weapons, advanced aeronautics, rail guns and high-energy lasers.”<sup>6</sup> In addition to these new technologies, the strategy involves using “current capabilities in new and creative ways—like adapting our Tomahawk missiles to be used against moving targets in

a maritime environment, or using smart projectiles that can be fired from many of our existing land- and ship-based artillery guns to defeat incoming missiles at much lower cost per round.”<sup>7</sup>

Yet the question becomes how to integrate these potential offset technologies into joint and Service operating concepts such as the new U.S. Army Operating Concept *Win in a Complex World*.<sup>8</sup> For example, the concept uses focus areas and first principles to guide the acceleration of new technologies into the force. Instead of searching for technological silver bullets, the U.S. Army uses focus areas, such as mobile protected precision firepower and situational understanding, to develop concepts for achieving overmatch on a 21<sup>st</sup>-century battlefield.

There are several ways offsets could be applied to deter adversaries and assure allies in the contemporary operating environment. The Third Offset could be part of a cost-imposing concept designed to achieve limited objectives in peacetime great-power competition.<sup>9</sup> Such a move would parallel important Cold War cases, including the U.S. Air Force’s development of new bomber concepts to penetrate Soviet defenses as a means of increasing the amount of Warsaw Pact resources spent on air defense.<sup>10</sup> Alternatively, the Third Offset technologies could be integrated into a denial concept that seeks to convince the enemy it is costly to accomplish their objective.<sup>11</sup> For example, Chinese and Russian investments in antiaccess/area-denial capabilities can be thought of as a larger effort to deny U.S. power projection.<sup>12</sup>

It is not only technology but also how new capabilities are employed that produces military power.<sup>13</sup> A new capability is more than just a new technology. It requires new concepts for employing the systems and training on how to operate them as part of a larger joint fight. The strategy is unlikely to reach its full potential until the joint community develops new operating concepts.

### Wargaming as Experimentation

The Department of Defense should pursue a joint wargaming initiative designed to generate new concepts

around the proposed offset technologies. Wargames serve as a time-tested mechanism for generating new ideas about warfare.<sup>14</sup> These ideas can then be tested through further analysis and field and fleet experiments.

Wargaming is “a representation of military activities, using rules, data, and procedures, not involving actual military forces, and in which the flow of events is affected by, and in turn affects, decisions made during the course of those events by players acting for the actors, factions, factors and frictions pertinent to those military activities.”<sup>15</sup> Within this broad continuum, analytical wargaming is the use of competitive scenarios designed to further understand the changing character of warfare and enable future planning.<sup>16</sup> These games provide their players, usually military officers and civilian defense officials, with “decision-making experience and decision-making information.”<sup>17</sup>

There is a long history of using wargaming to develop new tactics and operating concepts in the profession of arms. Prior to World War I, German Field Marshal Alfred Graf von Schlieffen used a combination of wargames and field exercises to test operating concepts.<sup>18</sup> During the interwar period, the U.S. Navy used the Naval War College to generate new ideas about fleet tactics and employing emerging capabilities like aircraft carriers.<sup>19</sup> These experiments connected the schoolhouse and the fleet. In 1925, Admiral Joseph Reeves moved from heading the tactics department at the Naval War College, where he used wargaming to develop new concepts for carrier aviation, to commanding the USS *Langley*, an experimental carrier.<sup>20</sup> U.S. Army General Donn Starry used a series of corps-level wargames and simulations on the “central battle” in the Fulda Gap to stress test the Active Defense doctrine and develop the conceptual foundation of AirLand Battle.<sup>21</sup> The Office of Net Assessment used a series of seminar-based wargames to develop creative ideas for harnessing the power of precision strike throughout the 1980s and 1990s.

There is a new interest in the use of wargaming to generate new operating

concepts. Secretary Work and General Paul Selva, USAF, have called for a new era of wargaming to prepare for future wars.<sup>22</sup> The RAND Corporation has opened a Center for Gaming to explore new approaches to national security challenges.<sup>23</sup> Through the Brute Krulak Center, the Marine Corps University is reintroducing competitive wargames into JPME to develop creative problem-solving techniques and explore the changing character of war.<sup>24</sup> Paralleling these efforts, American University's School of International Service is exploring how to use games as a means of helping students consider new solutions to global challenges ranging from climate change to complex humanitarian emergencies and mass migration.

There are best practices associated with analytical wargames used to develop new concepts.<sup>25</sup> First, games need multiple parties engaged in a competitive struggle, which facilitates creativity and new approaches. Second, the games should be set in realistic scenarios that have uncertainty, risk/reward dynamics, and different objectives for the actors. According to Williamson Murray and Macgregor Knox, "Every major cluster of innovations during the interwar period that resulted in a revolution in military affairs . . . depended on the existence of concrete adversaries against which to frame innovation."

Third, the games have to be recorded and the decision calculus tracked in order to facilitate discussion about options. These observations enable a robust dialogue after the game, encouraging critical reflection on the nature and character of war. Games should start conversations, not end them.

Fourth, the games should clearly distinguish between tactical engagements and operational-level campaigns.<sup>26</sup> Tactical games help participants learn how to use a new capability in a battle. Operational-level games help participants situate campaign-level objectives and determine which options are available, given a new capability. For example, would the introduction of rail guns on multiple classes of surface combatants and forward-deployed artillery

units alter campaign objectives or simply increase the joint force's effectiveness in reaching existing objectives? Do new capabilities open up entirely new objectives and lines of effort in the campaign planning process?

Fifth, the game designers need to choose the format that best facilitates concept development. There are four types of analytical wargames: seminar, matrix, free *kriegsspiel* (German for "wargame"), and rigid *kriegsspiel*.<sup>27</sup> Seminar games and matrix games are loosely structured and focus on allowing the participants to interpret events. *Kriegsspiel* descends from a Prussian game used to train operational and tactical decisionmaking. Applied to modern wargaming, free and rigid *kriegsspiels* imply analytical games with a more structured rule set. These rules could be based on everything from force-ratio calculations to the limits of certain weapons systems or allied preferences. Unlike seminar and matrix games, these rules are established in advance as opposed to interpreted and debated.

To develop a modern joint concept, wargames must specify a military problem in the context of a clear political objective and provide a forum in which practitioners can imagine a wide range of possible solutions. A concept is a "description of a method or scheme for employing specified military capabilities in the achievement of a stated objective or aim."<sup>28</sup> Joint concepts "examine military problems by describing how the Joint Force, using military art and science, may conduct joint operations, functions, and activities in response to a range of future challenges."<sup>29</sup> For former Chairman of the Joint Chiefs of Staff General Martin Dempsey, USA, concepts "inform our ideas and sharpen our thinking as we determine how to meet the requirements laid out in . . . defense strategic guidance."<sup>30</sup> They are the central ideas that evolve through deliberation into doctrine.<sup>31</sup>

Rigid bureaucracies like military organizations require arenas outside the normal chain of command in which to develop new ideas about fighting war.<sup>32</sup> Wargames provide one such forum,

enabling a wide range of officers, as practitioners, to investigate new ways of solving an emerging military challenge in relation to stated national interests and joint objectives. Game design should capture "the identification and refinement of a joint military problem, a proposed operational solution, and the capabilities required to implement the proposed solution."<sup>33</sup> Participants assume a competitive role in this environment and test new ideas from operational solutions to new capabilities.

## Wargaming Offsets

The Third Offset is a central idea in U.S. military thought that should be tested through broad-based wargaming efforts that create a vibrant marketplace of ideas. First, the wargames should be structured in a manner that recreates the interwar loop at the Naval War College.<sup>34</sup> There should be a dialogue between the Joint Staff, Services, and researchers in JPME-granting institutions about the future of war. This dialogue should be rooted in an active research program, thereby implying a requirement for more rigorous publication standards for JPME-granting institutions, and should integrate students. Major research universities incorporate graduate students into their investigations, and the same should be true for JPME-granting institutions that also offer accredited graduate degrees. The officers in attendance, typically field grade officers, have the types of tactical-level insights and recent battlefield experiences that make games more realistic.

The schoolhouses could become hothouses of ideas, sites where officers engage in research and take ownership of the ideas that will become future doctrine. Such a move would require a significant shift to current curriculum development approaches in JPME institutions. Curriculum is often overprescribed based on the requirements of the Chairman of the Joint Chiefs of Staff, Officer Professional Military Education Policy, and host institution instructions.<sup>35</sup> JPME institutions often do not teach the graduate-level historical or social science research methods



Electromagnetic Railgun launches projectiles using electricity instead of chemical propellants for use aboard ships, June 21, 2012 (U.S. Navy/John F. Williams)

required to help their students develop and test new ideas, as concepts, about future warfare.<sup>36</sup> As a result, many schools have difficulty producing space in the curriculum to develop and test new operating concepts.

Two institutions are taking steps to remedy the current state of affairs, however. The U.S. Army War College is seeking to link research faculty and students to current strategic priorities of the Chief of Staff of the Army and the larger joint community. In September 2015, the college designed and played a wargame for the U.S. Army G3/5/7. Played by a mix of students and technical experts, the game explored future modernization options for mission command networks. The game designers used the principles of the Army Operating Concept to evaluate each player's moves. Through a partnership between the Army War College and the Army Capabilities Integration Center (ARCIC), senior Service college students help design the future force as part of the annual Unified Quest wargame. ARCIC is also exploring the use of online gaming

environments to conduct virtual maneuvers in order to assess prototypes.<sup>37</sup>

The Marine Corps University, through the Brute Krulak Center and the Advanced Studies Program, is connecting students writing their master's theses with defense partners such as U.S. European Command and the Marine Corps Warfighting Lab in focused research lines linked to ongoing concept development. For example, in 2015 students researched the future of warfighting in a megacity and tested their concepts through seminar-style wargames. Though promising, these initiatives should be funded and connected to joint concept development in a more deliberate manner that incentivizes civilian faculty and JPME students to collaborate on developing new concepts to test ideas like the Third Offset through forums such as wargames.

Second, the joint community should take ideas developed in wargaming the Third Offset in schoolhouses and crowdsource them. There is a new interest in crowdsourcing and predictive marketplaces in businesses and the Intelligence

Community.<sup>38</sup> Crowdsourcing implies harnessing the diversity of perspectives in large populations to enhance decisionmaking. Each individual has a different piece of information that could aid in making a decision. Collecting and comparing these different viewpoints increases the chances of being correct about the future. The process also helps leaders identify "zombies," capability investments that are no longer relevant on the modern battlefield.<sup>39</sup>

Applied to wargaming the Third Offset, the joint concept development community should take the concepts developed at schoolhouses and in operational units and test and refine them through crowdsourcing. Using a variety of unit-level exercises would provide a higher level of fidelity to experimentation and help the military spot innovative leaders. For example, a low-cost means to tap into the wisdom of crowds would be to task every Army brigade to submit a Third Offset-related new concept, organizational change, or technological improvement that would fundamentally



change the way they operate. As the ideas are vetted, the Army could identify bright tactical-level officers and noncommissioned officers who are comfortable with innovating. In the words of key AirLand battle architect General Starry, the Army should find the “professional visionaries and malcontents”<sup>40</sup> with an aptitude for experimentation and tactics who could be groomed for future leadership positions. This group of innovators could then be put to work in a variety of settings, such as U.S. Army Training and Doctrine Command (for example, ARCIC wargames), the Joint Staff (for example, studies and war plans), and the Office of the Secretary of Defense (for example, the Office of Net Assessment and the Defense Innovation Unit Experimental in Silicon Valley). These efforts could build a tactical cascade of innovative behavior that can serve as a guide to new overarching doctrine that applies Third Offset technological advances.

The crowd could expand beyond the military to include social scientists and historians in civilian academic institutions and the private sector. The general public could even participate in unclassified forums via platforms such as Amazon’s Mechanical Turk, which allows random users to answer survey questions.<sup>41</sup> At a minimum, the concepts could be refined into operational and tactical decision games distributed across the force, allowing rank and file members of the joint community to weigh in.

There is an emerging precedent for crowdsourcing in the national security arena. The Chief of Naval Operations Rapid Innovation Cell puts out an annual call for new ideas across the Department of the Navy.<sup>42</sup> In 2015, the Department of Defense, the Department of State, and the U.S. Agency for International Development launched the Defense, Diplomacy, and Innovation Summit in search of new approaches to interagency collaboration from all ranks in each institution.<sup>43</sup> Crowdsourcing has also been applied to massive online wargaming through the Office of Naval Research–sponsored Massive Multiplayer Online Wargame Leveraging the Internet, hosted by the Naval Postgraduate School.<sup>44</sup>

Through the Force 2025 Maneuvers, the U.S. Army conducts “wargaming, exercises, experiments, evaluations, and other efforts focused on determining how the Army organizes and designs the force.”<sup>45</sup> These initiatives include maintaining Wiki-type Web sites where Soldiers and civilians can comment on ongoing Army warfighting challenges.<sup>46</sup>

In practice, this approach to wargaming the Third Offset implies the following. First, the joint concept community would collaborate with JPME institutions to design games that introduce Third Offset capabilities in campaigns linked to current war plans. Students playing these games would then work with faculty to develop research initiatives on new concepts. These concepts, as solution sets to the military problem in the game, would then be crowd-sourced and stress-tested across a larger community. Parallel experimentation would occur in tactical units, creating a competitive marketplace of ideas. Such an approach has the potential to reinvigorate JPME institutions and develop leaders of future military thought.

## Conclusion

To maintain its long-term competitive advantage, the U.S. military is pursuing a Third Offset Strategy. To integrate capabilities ranging from rail guns and high-energy lasers to big data and artificial intelligence and robotics, however, the joint force needs to usher in a new era of conceptual experimentation. The next joint concept should emerge through wargaming proposed offset capabilities. These analytical forums would allow the larger national security community to assess a broad range of alternative future operating concepts and force structures.

Officers should take an active role and imagine future battlefields as part of their JPME experience and field exercises, learning to analyze the art and science of military practice. The joint community can work with the individual Services and integrate Third Offset wargames with JPME curriculum. Officers and the civilian academics who work in JPME should be incentivized to research and

critique alternative operating concepts that emerge from the wargames.

Pursued along these lines, the net benefit of wargaming the Third Offset could well be to empower a new generation of military leaders to take ownership of intellectual development in the profession of arms. The operational tempo over the last 14 years and the reliance on government civilians and contractors has led to a situation in which fewer and fewer officers publish their ideas on warfare. Wargames integrated with JPME curriculum and field exercises could provide a forum for generating new ideas and a spirit of reasoned debate about future war. The joint doctrine community has yet to coalesce around an AirLand Battle 2.0 or AirSea Battle 2.0. Aggregating Third Offset–focused wargames and tactical experiments can start this process and provide a means of finding candidates for future joint doctrine while avoiding costly dead ends. JFQ

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## Notes

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<sup>2</sup> Robert Work, convocation speech delivered at National Defense University, Washington, DC, August 5, 2014, available at <[www.defense.gov/News/Speeches/Speech-View/Article/605598](http://www.defense.gov/News/Speeches/Speech-View/Article/605598)>.

<sup>3</sup> Robert Work, speech at the Center for a New American Security, December 14, 2015, available at <[www.cnas.org/transcripts/work-remarks-national-security-forum#.VplNyzbU-jyM](http://www.cnas.org/transcripts/work-remarks-national-security-forum#.VplNyzbU-jyM)>.

<sup>4</sup> Robert Work, speech at U.S. Army War College Strategy Conference, Carlisle Barracks, PA, April 8, 2015, available at <[www.defense.gov/News/Speeches/Speech-View/Article/606661](http://www.defense.gov/News/Speeches/Speech-View/Article/606661)>.

<sup>5</sup> Paul Norwood and Benjamin Jensen, “How the U.S. Army Remains the Master of Landpower,” *War on the Rocks*, October 1, 2015, available at <<http://warontherocks.com/2015/10/how-the-u-s-army-remains-the-master-of-landpower/>>.

<sup>6</sup> Ashton Carter, Submitted Statement to the Senate Appropriations Committee–Defense on the Fiscal Year 2016 Budget Request for the Department of Defense, May 6, 2015, available at <[www.appropriations.senate.gov/imo/media/doc/hearings/050615%20Secretary%20](http://www.appropriations.senate.gov/imo/media/doc/hearings/050615%20Secretary%20)>.

Carter%20Testimony%20-%20SAC-D.pdf>.

<sup>7</sup> Ibid.

<sup>8</sup> U.S. Army Training and Doctrine Command (TRADOC) Pamphlet 525-3.1, *The U.S. Army Operating Concept: Win in a Complex World, 2020–2040* (Fort Eustis, VA: TRADOC, October 2014).

<sup>9</sup> Thomas Mahnken, *Cost-Imposing Strategies: A Primer* (Washington, DC: Center for a New American Security, November 2014), 6.

<sup>10</sup> Ibid., 10–11.

<sup>11</sup> A. Wess Mitchell, “The Case for Deterrence by Denial,” *The American Interest*, August 12, 2015, available at <www.the-american-interest.com/2015/08/12/the-case-for-deterrence-by-denial/>.

<sup>12</sup> Andrew Krepinevich, Barry Watts, and Robert Work, *Meeting the Anti-Access and Area-Denial Challenge* (Washington, DC: Center for Strategic and Budgetary Assessments, 2003), 13.

<sup>13</sup> Stephen Biddle, *Military Power: Explaining Victory and Defeat in Modern Battle* (Princeton: Princeton University Press, 2004).

<sup>14</sup> For an overview of the history of wargaming, see Davy Banks, *Analytical Wargaming: An Overview*, School of International Service Working Paper (Washington, DC: American University, 2015); Peter P. Perla, *The Art of Wargaming: A Guide for Professionals and Hobbyists* (Annapolis, MD: Naval Institute Press, 1990); Martin van Creveld, *Wargames: From Gladiators to Gigabytes* (Cambridge: Cambridge University Press, 2013); and Philip Sabin, *Simulating War: Studying Conflict through Simulation Games* (London: Continuum International Publishing Group, 2012).

<sup>15</sup> Perla; Banks, 2.

<sup>16</sup> Banks, 2.

<sup>17</sup> Francis J. McHugh, *Fundamentals of War Gaming*, 3<sup>rd</sup> ed. (Washington, DC: U.S. Government Printing Office, 1966), 1–10.

<sup>18</sup> Perla, 41.

<sup>19</sup> Michael Vlahos, *The Blue Sword: The Naval War College and the American Mission, 1919–1941* (Newport, RI: Naval War College Press, 1980).

<sup>20</sup> Jan van Tol, “Military Innovation and Carrier Aviation—An Analysis,” *Joint Force Quarterly* (Autumn/Winter 1997–1998), 102.

<sup>21</sup> Benjamin Jensen, *Forging the Sword: Doctrinal Change in the U.S. Army* (Palo Alto, CA: Stanford University Press, 2016).

<sup>22</sup> Robert Work and Paul Selva, “Revitalizing Wargaming Is Necessary to Be Prepared for Future Wars,” *War on the Rocks*, December 8, 2015, available at <http://warontherocks.com/2015/12/revitalizing-wargaming-is-necessary-to-be-prepared-for-future-wars/>.

<sup>23</sup> RAND Center for Gaming, available at <www.rand.org/capabilities/methods-centers/gaming.html>.

<sup>24</sup> Marine Corps University Brute Krulak Center, available at <www.mcu.usmc.mil/cac/SitePages/CAC.aspx>.

<sup>25</sup> Banks, 9.

<sup>26</sup> Dale C. Eikmeier, “Waffles or Pancakes? Operational- versus Tactical-Level Wargaming,” *Joint Force Quarterly* 78 (3<sup>rd</sup> Quarter 2015), available at <http://ndupress.ndu.edu/JFQ/Joint-Force-Quarterly-78/Article/607625/waffles-or-pancakes-operational-versus-tactical-level-wargaming/>.

<sup>27</sup> Banks, 10; Phillip E. Pournelle, “Improving Wargaming in DOD,” PowerPoint presentation at Connections Wargaming Conference, 2015, available at <http://connections-wargaming.com/agenda/>.

<sup>28</sup> John Schmidt, “A Practical Guide for Developing and Writing Military Concepts,” Defense Adaptive Red Team Working Paper 02-4, December 2002, available at <www.au.af.mil/au/awc/awcgate/writing/dart\_paper\_writing\_mil\_concepts.pdf>.

<sup>29</sup> Chairman of the Joint Chiefs of Staff Instruction (CJCSI) 3010.02D, *Guidance for Development and Implementation of Joint Concepts* (Washington, DC: The Joint Staff, November 22, 2013), A-1, available at <www.dtic.mil/doctrine/concepts/cjcsi3010\_02d.pdf>.

<sup>30</sup> *Capstone Concept for Joint Operations, Joint Force 2020* (Washington, DC: The Joint Staff, September 10, 2012), available at <www.dtic.mil/doctrine/concepts/ccjo\_joint-force2020.pdf>.

<sup>31</sup> For an overview on the relationship between concepts and doctrine, see Jensen, *Forging the Sword*.

<sup>32</sup> Benjamin Jensen, “Escaping the Iron Cage: The Institutional Foundations of FM 3-24 Counterinsurgency Doctrine,” *Journal of Strategic Studies* 160, no. 6 (2015); Jensen, *Forging the Sword*.

<sup>33</sup> CJCSI 3010.02D, A-1.

<sup>34</sup> For an overview of this time period, see Vlahos.

<sup>35</sup> CJCSI 1800.01E, *Officer Professional Military Education Policy* (Washington, DC: The Joint Staff, May 29, 2015), available at <www.dtic.mil/doctrine/education/officer\_JPME/cjcsi1800\_01e.pdf>.

<sup>36</sup> Celestino Perez, “Strategic Discontent, Political Literacy, and Professional Military Education,” *The Strategy Bridge*, January 14, 2016, available at <www.thestrategybridge.com/the-bridge/2016/1/7/strategic-discontent-political-literacy-and-professional-military-education>.

<sup>37</sup> To support these initiatives, the Army Capabilities Integration Center sponsored a RAND study titled *Utilizing Gaming Environments to Explore New Operational Concepts* (Santa Monica, CA: RAND, forthcoming).

<sup>38</sup> For an overview, see James Surowiecki, *The Wisdom of the Crowd* (New York: Anchor, 2005); and Philip Tetlock, *Superforecasters: The Art and Science of Prediction* (New York: Crown, 2015).

<sup>39</sup> The concept of zombie projects, prior innovations that are no longer relevant and hold back organizations in terms of resources, emerges from business literature. See Scott An-

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<sup>40</sup> Lewis Sorley, ed., *Press On! Selected Works of General Donn A. Starry, Volume 1* (Fort Leavenworth, KS: U.S. Combined Arms Center, Combat Studies Institute, September 2009).

<sup>41</sup> For an overview of the program, see the Amazon Web site at <www.mturk.com/mturk/welcome>.

<sup>42</sup> Chief of Naval Operations, Rapid Innovation Cell, available at <www.navy.mil/submit/display.asp?story\_id=85177>.

<sup>43</sup> Secretary of Defense, Memorandum on Department of Defense Participation in the October 2015 Defense, Diplomacy, and Development Innovation Summit Pitch Challenge, September 11, 2015, available at <www.tradoc.army.mil/FrontPageContent/Docs/D3Pitch-Challenge.pdf>.

<sup>44</sup> Naval Postgraduate School, Massive Multiplayer Online Wargame Leveraging the Internet, available at <https://portal.mmowgli.nps.edu/game-wiki/-/wiki/PlayerResources/About%20MMOWGLI>.

<sup>45</sup> U.S. Army Capabilities Integration Center, *Force 2025 Maneuvers White Paper* (Fort Eustis, VA: TRADOC, January 23, 2014), available at <www.arcic.army.mil/app\_Documents/USArmy\_WhitePaper\_Force-2025-Maneuvers\_23JAN2014.pdf>.

<sup>46</sup> Army Warfighting Challenges, available at <www.arcic.army.mil/Initiatives/army-warfighting-challenges.aspx>.



Audience members listen to General Dunford deliver graduation address at National Defense University's 2016 graduation ceremony, on Fort Lesley J. McNair, Washington, DC, June 9, 2016 (DOD/Sean K. Harp)

# I Liked Ike . . .

## Whence Comes Another?

### Why PME Needs a Congressional Advocate

By John T. Kuehn

With all the discussion of troubles in the world of professional military education (PME), the obvious finally dawned on me in a discussion of the issue with a

colleague. Ever since former Representative Ike Skelton (D-MO) left Congress in 2010 (dying only 3 years later), PME has needed an advocate in Congress. Historians and pundits, however, including the author of this article, have perhaps missed this essential need in their prescriptions for enhancing, or reforming, higher level military education as it exists in the United States today.<sup>1</sup> We cite Ike's name as the basis

for reform but forget his profound role in enabling PME reform in the first place. To better understand that role, we must take a trip, as we historians are wont to do, down memory lane.

#### Historical Insights and Skelton's Legacy

The first step is to that oft-studied period between World War I and World War II—commonly referred to

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as the interwar period—during which significant insights regarding military education were formulated. Much has been written about the relative advantage conferred by honest PME during this period, particularly in institutions as disparate as the *Kriegsakademie* in Germany (and the Versailles-limited *Reichswehr* in general) and those in the United States (the Naval War College, the Command and General Staff College [CGSC], and the Air Corps Tactical School at Maxwell Field in Alabama). Some was, in fact, written by Congressman Ike Skelton himself.<sup>2</sup> More often than not, however, the role of Congress in all this is slighted, at least regarding PME. Nonetheless, the Services, and particularly the Navy, had an advocate on the naval subcommittee of what is today the House Armed Services Committee (HASC): Representative Carl Vinson (D-GA), who was the longest-serving member of Congress in the last century. Vinson’s impact on events, however, was indirect. He is most famous for three pieces of legislation that prepared the Navy for World War II—most significantly, the first Vinson-Trammel Bill in 1934 that finally put the Nation on a trajectory toward aligning its means with its strategic ends.<sup>3</sup> But there was a second-order effect from building all those new warships: Those students at the Naval War College who wargamed and studied this problem could put their findings into practice during the Navy’s “Fleet Problems,” large-scale exercises conducted each year between 1923 and 1940. In these exercises, U.S. naval forces would engage in mock battles that served as the culmination of the Service’s annual training maneuvers. At the conclusion of each exercise, the Navy cycled the lessons learned back into the schoolhouse, a difficult task in the absence of any force structure.<sup>4</sup>

Our second example, however, set in 1987, involves almost the reverse situation. After helping to craft and pass the landmark Goldwater-Nichols Department of Defense Reorganization Act of 1986, Skelton formed a panel—known as the Skelton Panel—to look

at joint PME (JPME).<sup>5</sup> The work and findings of the panel eventually made their way into the “Bible” of JPME, the Officer Professional Military Education Policy (OPMEP) instruction (also referred to as the Chairman of the Joint Chiefs of Staff 1800 series). The rather stifling military nomenclature is included here not only to emphasize how a truly transformative and influential document can hide itself behind acronyms, but also to serve as a sort of talisman to ward off the evil spirits who would undermine Skelton’s legacy. It seems that every day brings news of developments that undermine the essential goodness of Congressman Skelton’s great work and the intent of the OPMEP.

Skelton found the PME system in much disarray when he toured the Nation’s facilities in the late 1980s and early 1990s. For example, he wrote about the military history curriculum during his visit to CGSC:

*Another area that our panel report stressed was the study of military history, especially in helping to develop strategists. In our visit to Fort Leavenworth in 1988, the study of military history was confined to 51 hours and limited to the American experience of war in the 20<sup>th</sup> century.<sup>6</sup>*

It was just this sort of oversight in curriculum, class mix (of various Service officers), and joint faculty assignments that Skelton jealously monitored and worked with the Services to correct. On the issue of joint faculty, part of his reforms were undermined in 2007 when most of the joint faculty billets at the intermediate- and senior-level Service colleges were “de-coded” in a misguided “reprogramming” of these billets to new joint billets overseas and on joint staffs. These billets have never migrated back to the military education faculty jobs from which they were removed, despite the drawdown of forces in Iraq and Afghanistan.<sup>7</sup> As a result, the officers who explain one Service to the future leaders of other branches receive no credit for “joint time,” making joint instructor duty even less respected and sought after than it had been previously.

However, the challenge, especially following Skelton’s ouster from his position as chairman of the HASC by the Missouri Tea Party in 2010, has been who might replace him in his essential role as guardian of PME. That is right—I liked Ike. And so should all those who are committed to honest PME and JPME. Skelton is no longer here, however, so who can take his place? In truth, no one. I believe that this challenge has never been properly articulated as a question by anyone in power inside the Pentagon and by few outside. No one has stepped up to fill his shoes, perhaps because few elected representatives see any political value in assuming the role. It is almost as if the assumption was that, with Skelton gone, the system would somehow police itself. Anyone making this assumption has been proved wrong; large bureaucratic institutions are rarely successful policing themselves. There currently is no authoritative figure in Congress to whom individuals can appeal when the PME train goes off the rails, and the strengths of Skelton’s vision as enacted by Goldwater-Nichols and the subsequent Skelton Panel have been undermined by compromise and rollback.

It is all well and good to have professors working at intermediate- and senior-level Service colleges bemoan the problems with PME, but the real problem is a lack of effective congressional oversight or, more specifically, ineffective and disjointed leadership of congressional oversight. Congress has 535 voting members.<sup>8</sup> It is critical that someone (and preferably more than one individual) steps up to assume Skelton’s mantle as PME guardian. As cited in a 2010 HASC report, “the society that separates its scholars from its warriors will have its thinking done by cowards and its fighting done by fools.”<sup>9</sup> Naming a library after Ike Skelton has not been nearly enough. In fact, the only congressional representative who has come to the library named in his honor at Fort Leavenworth was the nonvoting member from the U.S. territory of Guam.<sup>10</sup> That seems to be a strong indicator of the true state of Skelton’s PME legacy.



Instructor inspects Marine's uniform during 16-day Corporals Course, U.S. Marine Corps Enlisted Professional Military Education course, which was taught for first time at Dyess Air Force Base, Texas, August 5, 2010 (U.S. Air Force/Domonique Washington)

### America's Got Talent

All is not lost, however. A number of names come immediately to mind—Members of the House and Senate who possess the requisite passion, interest, and talent to take on this exciting but challenging legacy—and they come from both sides of the aisle. Given the flux in leadership inside both the HASC

and the Senate Armed Services Committee (SASC) due to election cycles, it is inappropriate to name specific Members of the House or Senate here. There are, however, outspoken advocates for military preparedness across a range of issues involving national security and defense who write prolifically as a means to educate the public about

defense concerns.<sup>11</sup> These include Congressman J. Randy Forbes (R-VA), a member of the all-important HASC and thus a natural successor in that body to Skelton's PME watchdog legacy.

Who better to pick up Skelton's PME baton and continue to carry it until relieved than perhaps even a Member of Congress from his home state of Missouri? Whoever steps up to the plate will have to use a bipartisan team approach to perform the necessary function of policing PME and to combine forces in the best joint manner. This also has the key advantage of avoiding the sort of single-point failure that happened following Skelton's congressional defeat and would build some redundancy into the watchdog role. Another key task for his replacement(s) will be the ability to mentor others, since shifting political winds never guarantee anyone longevity in Congress. The short-term political payoffs may be small, but such a role would provide long-term benefits to the Nation and meet the real need to protect how we develop our strategic thinkers in the U.S. military.

### Conclusions and Recommendations

No one is minding the JPME store. The Department of Defense (DOD) has too large a span of control to do the job. Furthermore, it is somewhat ludicrous to ask the Chairman of the Joint Chiefs of Staff to do this job, which has been delegated, for all intents and purposes, to the Joint Staff J7, the component that was assigned responsibility for JPME. The military has thus been tasked to police itself and its constituent institutions, none of which are answerable directly to the J7. Although the J7 has the Process for Accreditation of Joint Education (PAJE) portfolio, this portfolio is in actuality on loan from the Chairman, who in turn has received the responsibility from the Office of the Secretary of Defense, which by law is responsible for this function.

The ability of these trustworthy organizations to effectively police PME institutions has been eroded due to

changes in the accreditation process since 9/11, which have minimized the number of PAJE visits institutions receive by comparison to the previous model of annual or biannual visits. This was primarily due to the implementation of further self-policing by “institutional self-studies.”<sup>12</sup> One might reasonably respond that many of these negative things occurred while Skelton was still on watch. This is partially the case. However, they were all implemented for the same reasons: the Nation was at war in both Iraq and Afghanistan and needed some *temporary* relief from peacetime OPMEP and PAJE requirements. Unfortunately, what were once vices are now established habits. In 2010, just as the war in Iraq was winding down, Skelton left Congress. In the 6 years since, nothing substantive has been done to rescind these measures. The most recent House legislation of April 2016 does not include any of the modest education reforms discussed in both SASC and HASC hearings held this spring. In fact, the only two references to PME are for medical trauma and “Small Business Regulations.”<sup>13</sup> Thus any moves toward reform of PME will have to wait until next year. In the meantime, the J7 has stonewalled any change to the joint duty assignment list, as was discussed in a session of the Higher Learning Commission representatives (who accredit graduate-level education) with CGSC faculty in early 2016.<sup>14</sup>

The first step that should be taken by the new Ike Skelton or Skelton-like team would be to immediately return to the more rigorous oversight system in place before 9/11. This means the return of at least biannual PAJE visits, if not annual, as well as the return of the joint billets to PME faculties to make these jobs more attractive and career enhancing—as was the original intent. DOD, however, needs oversight from another branch of government: Congress. It is incumbent upon congressional leadership to step up to the plate. There are many politicians who claim to be strong on defense. This area of PME oversight represents an opportunity for them to “put their money where their mouth is” and do the late, great Ike Skelton proud. JFQ



Professional military education instructor, 62<sup>nd</sup> Airlift Wing, speaks with students about results of their graded assignment, August 26, 2015, at Julius A. Kolb Airman Leadership School at Joint Base Lewis-McChord, Washington (U.S. Air Force/Sean Tobin)

## Notes

<sup>1</sup> See, for example, Nicholas Murray, “Finally, Official Recognition That CGSC Is Broken, Bust and in the Ditch,” *Foreign Policy*, September 25, 2015, available at <<http://foreignpolicy.com/2015/09/25/finally-official-recognition-that-cgsc-is-broken-bust-and-in-the-ditch/>>; Joan Johnson-Freese, “The Reform of Military Education: Twenty-Five Years Later,” *Orbis* 56, no. 1 (Winter 2012), 135–153; and John T. Kuehn, “The Goldwater-Nichols Fix: Joint Education Is the Key to True ‘Jointness,’” *Armed Forces Journal* (April 2010).

<sup>2</sup> Ike Skelton, “JPME: Are We There Yet?” *Military Review* 77, no. 1 (January–February 1997), 6–7.

<sup>3</sup> James F. Cook, *Carl Vinson: Patriarch of the Armed Forces* (Macon, GA: Mercer University Press, 2004), 87–88.

<sup>4</sup> Barry Watts and Williamson Murray, “Military Innovation in Peacetime,” in *Military Innovation in the Interwar Period*, ed. Williamson Murray and Allan R. Millett (Cambridge, United Kingdom: Cambridge University Press, 1996), 300–402.

<sup>5</sup> House of Representatives, Subcommittee of the Committee on Armed Services, *Another Crossroads? Professional Military Education Twenty Years After the Goldwater-Nichols Act and the Skelton Panel*, Publication No. 111-67 (May 20, 2009). See also Johnson-Freese, 135–136.

<sup>6</sup> Skelton, 6.

<sup>7</sup> Kuehn, 32. These billets are known as joint duty assignment list billets and qualified as joint qualification billets toward the joint qualified officer required for all flag officers under Goldwater-Nichols.

<sup>8</sup> See GovTrack.com Web site, available at <[www.govtrack.us/congress/members](http://www.govtrack.us/congress/members)>.

<sup>9</sup> Cited in Johnson-Freese, 135.

<sup>10</sup> The Combined Arms Research Library that services the Command and General Staff College (CGSC) was renamed the Ike Skelton Combined Arms Research Library in 2013.

<sup>11</sup> See, for example, “Committee Assignments” at Congressman J. Randy Forbes’s Web site, available at <<http://forbes.house.gov/biography/committees.htm>>. See also J. Randy Forbes, “Rebalancing the Rhetoric,” *Proceedings* 138, no. 10 (October 2012), available at <[www.usni.org/magazines/proceedings/2012-10/rebalancing-rhetoric](http://www.usni.org/magazines/proceedings/2012-10/rebalancing-rhetoric)>.

<sup>12</sup> Government Accountability Office (GAO), *Joint Military Education: Actions Needed to Implement DOD Recommendations for Enhancing Leadership Development* (Washington, DC: GAO, October 2013), passim, and reference to self-studies, 18. The annual Process for Accreditation of Joint Education (PAJE) visits seem to be a feature of the past that is not well documented in the 2013 GAO report. The author’s personal experience involved PAJE visits to Fort Leavenworth from 2001–2005.

<sup>13</sup> U.S. House of Representatives, *H.R. 4904 FY17 National Defense Authorization Bill, Chairman’s Mark*, April 2016, 3–11, available at <<http://docs.house.gov/meetings/AS/AS00/20160427/104832/BILLS-114HR4909ih-FC.pdf>>.

<sup>14</sup> This information was passed to the author at the meeting of the Higher Learning Commission members with CGSC faculty on February 29, 2016. One representative was well versed in the recent initiative by the Military Education Coordination Council with Joint Staff J7 regarding joint duty assignment list reprogramming or expansion. The author also obtained verification of this information in conversations with James B. Martin, the assistant dean of CGSC.





# Is the Chinese Army the Real Winner in PLA Reforms?

By Phillip C. Saunders and John Chen

Ground force officers run China's military, the People's Liberation Army (PLA). About 70 percent of PLA soldiers serve in the PLA Army (PLAA), and ground officers occupy almost all senior positions on the

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Central Military Commission (CMC) and in China's new theater commands. The PLA's history, traditions, and organizational culture are all built upon the PLAA role in bringing the Chinese Communist Party (CCP) to power. Until the establishment of a separate army headquarters in January 2016, the PLA's major organizations (the general departments) existed primarily to serve the needs of the army.<sup>1</sup> Pictures of the CMC staff or of visiting Chinese National Defense University delega-

tions show only a smattering of navy white and air force blue uniforms in a sea of army green.

Despite this traditional dominance, the PLAA has lost status, budget share, and end strength relative to the other services in recent years. Since 2004, Chinese defense white papers have emphasized the need for increased funding for the navy, air force, and Second Artillery (which was elevated in status and renamed the Rocket Force in January 2016). "Optimizing the composition of the

services and arms of the PLA” has meant reductions in “technologically backward” PLAA units and personnel increases for the other services.<sup>2</sup> Most of the 300,000 troops that will be cut from the PLA will come from army ranks. Moreover, the army is widely perceived as the likely loser in current PLA organizational reforms.<sup>3</sup> Elimination of the general departments and establishment of a new army commander and headquarters reduced the army to bureaucratic equality with the other services. The PLAA also lost direct control of space and cyber units, which were transferred to the new Strategic Support Force.

Current senior PLAA officers all retained their rank and were given new positions after the reforms, but there is no guarantee that this transitional arrangement will continue when the next military command shuffle occurs in 2017. Some positions may be downgraded once the current incumbents leave, and the other services will press for more leadership positions on the CMC staff.

The apparent PLAA sense of decline may be intensifying. Despite President and CMC Chairman Xi Jinping’s insistence that the army plays an “ir-replaceable” role in protecting national interests,<sup>4</sup> the new PLAA commander used his first media interview to refute the notion that “land warfare was outdated and the army is useless.” Editorials in the *PLA Daily* and other outlets followed suit shortly thereafter.<sup>5</sup>

The current reform’s emphasis on improving the PLA’s ability to conduct multi-service joint operations [军种联合作战, *junzhong lianhe zuozhan*] implies a higher status and increased funding for the navy, air force, Rocket Force, and the new Strategic Support Force. The steady decline in PLAA size, status, and relevance poses an interesting puzzle: why would a PLA dominated by army officers acquiesce to reforms that apparently further weaken the status of the service?

In this article, we argue that the reforms can also be read as an effort by PLAA commanders to use new joint command and control (C2) arrangements to reassert the service’s strategic relevance and political muscle by gaining

the ability to command assets controlled by the other services. We flesh out the argument that core army capabilities have become less relevant to China’s most pressing external threats and national security priorities, examine why the army failed to adapt, and highlight how new PLA joint C2 structures may serve PLAA institutional interests at a potential cost in overall operational effectiveness.

### Shifting Priorities and Decreasing Army Relevance

The collapse of the Soviet Union in 1991 and improved relations with many neighboring countries removed China’s most serious traditional military threats. With the exception of a continuing land border dispute with India, China currently faces no major threats on its borders, reducing the salience of the PLAA’s traditional mission of defending against land invasion.<sup>6</sup> Although the service could be called upon to respond to border contingencies in North Korea, Burma, or Pakistan, China’s remaining land threats mainly involve cross-border terrorism or instability in neighboring countries.<sup>7</sup>

As land threats dissipated, China’s rapid integration into the global economy created increasingly important national interests well beyond its immediate land borders. The shift in China’s strategic orientation toward the sea and away from land threats began as early as the 1980s.<sup>8</sup> Changes in China’s “Military Strategic Guidelines” in 1993 reflected an increased emphasis on Taiwan contingencies and protecting maritime interests in the South and East China seas, all of which required power projection capabilities as well as the capacity to forestall U.S. intervention in order to achieve the desired results.<sup>9</sup>

Hu Jintao’s 2004 “New Historic Missions” [新的历史使命] marked a clear shift in Chinese national security priorities, calling for the armed forces to secure party rule, safeguard national development, protect national interests, and promote world peace and common development.<sup>10</sup> Securing sea lines of communication, protecting Chinese nationals and economic interests overseas, and

contributing to global public goods such as counterpiracy, counterterrorism, peace-keeping, and humanitarian assistance and disaster relief operations have all figured more prominently as PLA missions.<sup>11</sup> Consistent with this shift, China declared itself a “maritime power” in the 2012 party congress work report and has given maritime and overseas operations pride of place in recent defense white papers.

The PLAA is relevant to some of Hu’s “New Historic Missions,” but these do not justify much manpower or the acquisition of new capabilities. The army retains formal responsibility for the high-priority missions of maintaining domestic stability and ensuring CCP rule, but in practice primary responsibility for these functions has shifted to the public security forces and the People’s Armed Police (PAP).<sup>12</sup>

The 2015 defense white paper calls for the armed forces to protect Chinese air, land, and sea sovereignty; protect Chinese unification; safeguard Chinese security in new domains; maintain regional and world peace; protect overseas interests; maintain strategic nuclear deterrence; counter separatists and terrorists; and perform emergency rescue and disaster relief missions.<sup>13</sup> The 2015 white paper, along with other authoritative PLA writings such as the 2013 edition of *Science of Military Strategy*, also place great emphasis on major power competition in the maritime, nuclear, space, and cyber domains.<sup>14</sup>

However, the PLAA has either lost or never owned the capabilities most relevant to a party leadership that is increasingly focused on missions outside China’s land borders. The army does not have rapid reaction airborne forces or the strategic lift capabilities needed to move forces beyond China’s land borders—paratroopers and strategic airlift assets both belong to the air force. The PLAA does not operate long-range surface-to-air missiles that can defend Chinese airspace, does not command conventional or nuclear missile forces that can enable power projection or deter nuclear attack, and has now ceded space and command, control, communications, computers, intelligence, surveillance, and

reconnaissance missions to the Strategic Support Force.

Even in areas where army capabilities are relevant to China's new strategic focus, the PLAA faces stiff competition from other services. Army amphibious units would have primary responsibility for the ground aspects of an invasion of Taiwan, but the PLA Navy Marine Corps has the lead for South China Sea amphibious operations. Each service in the PLA operates unmanned aerial vehicles of various types for its own purposes.<sup>15</sup> The PLAA has ceded many counterterrorism missions to Ministry of Public Security forces and the PAP. Though the PLAA has developed an air assault capability, is increasingly mechanized, and has improved its ability to move forces within China, it would require considerable support from other services to get to and stay in the fight, especially if the fight is outside China's borders or across water.

### Why Didn't the Army Adapt?

Given the slow-moving nature of China's strategic shift, why did the PLAA fail to foresee the declining relevance of its capabilities and missions and adjust its priorities accordingly? Three possible explanations exist for the PLAA's current predicament.

One is the historical legacy of the Soviet military. The PLAA was patterned on the Soviet Red Army, which placed ballistic missiles, surface-to-air missiles, and paratroopers in different organizations outside army control. These organizational choices may not have struck army commanders as important concessions during the early days of the People's Republic of China, but once the missions and forces were ceded to other services, the PLAA was unable to wrest these capabilities back.

A second explanation focuses on China's traditional status as a continental power. PLAA leaders may have believed that the mission of protecting Chinese territory from invasion was important enough to justify preservation and modernization of core army capabilities. The PLAA has focused heavily on mechanization of the army and combined arms operations to improve ground combat

capability, and army leaders have been willing to accept large reductions in troop strength to fund this modernization.<sup>16</sup> A focus on improving the PLAA's ability to perform its traditional mission may have blinded army leaders to the increasing priority of other missions where army capabilities were less relevant.

A PLA debate in the early 2000s about the relative priority and sequencing of "mechanization" and "informationization" was a proxy for debates about the relative priority of service missions. The PLAA would have benefited most from a sequential approach that prioritized mechanization as a stepping stone toward informationization; the decision to pursue both goals simultaneously reduced the PLAA's claim on funding and allowed other services and specialized elements of the PLA to stake their own claims for modernization resources.<sup>17</sup>

Beyond mechanization, the PLAA's chief modernization priority has been in developing "new type forces" better suited for offensive operations. These include special operations, helicopter, electronic warfare, light mechanized, and long-range artillery units that may have more applicability to maritime and overseas missions. However, many of these capabilities remain comparatively underdeveloped despite high prioritization and two decades of modernization, and recent army transregional exercises have not emphasized an expeditionary role for the PLAA.<sup>18</sup>

A third possibility is that the PLAA's ability to advocate for army missions and priorities may have been hindered by a lack of bureaucratic coherence. An "army-by-default" mentality undercut the need to create a PLAA-specific identity and mission set, and the abundant but diffuse army presence in the highest levels of military command meant no single voice was responsible for advocating for army priorities. In contrast, other services were forced to carve out separate identities, missions, and service cultures to assert their independence and to capture resources and personnel. Once established, the services would naturally resist any PLAA efforts to take over capabilities most relevant to new missions and

priorities. (The new army headquarters will give the PLAA commander both a platform and the responsibility to advocate for army priorities; the army is also using reforms to educate soldiers about its future role and identity.<sup>19</sup>)

### Military Reforms: Expanding Army Control at the Expense of Effectiveness?

Given the PLAA's decreasing relevance to new tasks and missions, the military reforms could be interpreted as a way for the PLAA to reassert its strategic relevance and expand its control over other parts of the PLA. The new CMC Joint Staff Department, which has overall responsibility for joint operations, is commanded by former Chief of the General Staff Fang Fenghui of the PLAA. Army officers currently command all five theater commands (and hold four of the five political commissar positions at the theaters).<sup>20</sup> The new joint C2 structure gives these army officers full operational command over forces from all services during both war and peacetime. Under the old system, military region commanders did not exercise peacetime operational control over navy, air force, and Second Artillery assets within their areas of responsibility. Under the new system, the navy and air force headquarters no longer have an operational command role. The CMC Joint Staff Department has set up a new Overseas Operations Office that should eventually exercise control over PLA forces deployed far outside China's borders.

If the theater commands become the critical proving ground for future PLA leaders, then the PLAA will want to continue to reserve these positions for army officers. Going forward, the PLAA will likely seek to define the qualifications for joint command assignments and control the pipeline for new operational commanders in ways that benefit army officers. Reforms in China's military education system will create a new "operational command track" in the PLA National Defense University courses that train PLA officers for promotion to senior positions.<sup>21</sup> Attendance in command





Soldier makes fish trap during survival phase of Exercise Kowari 2016, Australian army–hosted survival skills exercise designed to increase defense cooperation between forces from the United States, Australia, and China, September 4, 2016 (Australian Defence Force/Jake Sims)

track courses will likely become a requirement for future joint command assignments. Whether that track is exclusive to or dominated by army offices will be a key leading indicator of whether the PLAA will continue to hold on to theater command slots and key CMC joint command positions. Conversely, if the navy, air force, and rocket force are over-represented in those courses, this would indicate an intent to rebalance joint command positions in ways that benefit officers from other services and create a more joint force.

From this perspective, the PLA's new joint C2 structure centered on theater commands may reflect the dominance of army thinking and army institutional interests. In some cases, this may produce suboptimal warfighting outcomes. The U.S. military emphasizes flexibility in conducting joint operations, selecting commanders from different Services

based on the most likely missions within a theater or putting together joint task forces led by a commander from the most relevant Service for the mission. In contrast, the current PLA approach of placing joint C2 mechanisms at the theater command level injects an army commander into the operational chain of command even if the mission does not require it. An army general heading the Southern Theater Command may not be best qualified to command forces in South China Sea maritime disputes; his presence in the chain of command adds an extra layer that subordinates must navigate to include other services in planning and conducting operations.

### Conclusion

We began with a puzzle: why would a PLA dominated by ground officers embrace joint reforms likely to reduce the size, status, and bureaucratic pre-

rogatives of the army relative to other services? A bureaucratic politics lens produces an unexpected answer: organizational reforms nominally intended to improve the Chinese military's ability to conduct joint operations have been heavily shaped by army organizational interests and will actually expand the ability of PLAA commanders to control forces currently owned by other services. The resulting C2 arrangements may be suboptimal for some kinds of joint operations (especially those with a heavy air or maritime focus).

A key question going forward is whether army officers will continue to hold on to key joint command positions in the CMC Joint Staff Department and in the theater commands, or whether officers from other services will eventually be able to stake a claim to those positions. Will the PLAA be able to influence selection, evaluation, and promotion criteria



Australian army–hosted Exercise Kowari 2016, at Larrakeyah Barracks, Northern Territory, Australia, focused on increasing friendship and trust between forces from the United States, Australia, and China through trilateral cooperation in Asia-Pacific and Indian Ocean Rim regions, August 26, 2016 (U.S. Marine Corps/Osvaldo L. Ortega III)

for theater command and joint command positions? To what extent will army-led theater commands delegate operational authority to service components? How will the new army headquarters fare in bureaucratic scuffles with other service headquarters? The answers to these questions will help determine whether the reforms will create a genuinely joint PLA, or serve as a backdoor means for army officers to extend their traditional dominance. JFQ

## Notes

<sup>1</sup> Phillip C. Saunders and Joel Wuthnow, *China's Goldwater-Nichols? Assessing PLA Organizational Reforms*, Strategic Forum 294 (Washington, DC: NDU Press, April 2016); Kevin Pollpeter and Kenneth W. Allen, eds., *The PLA as Organization v2.0* (Vienna, VA: Defense Group, Inc., 2015).

<sup>2</sup> State Council Information Officer, "China's National Defense in 2004," December 27, 2003.

<sup>3</sup> Saunders and Wuthnow; Kenneth W. Allen, Dennis J. Blasko, and John F. Corbett, Jr., *The PLA's New Organizational Structure: What Is Known, Unknown, and Speculation (Part 1)*, China Brief 16, no. 3 (Washington, DC: The Jamestown Foundation, February 4, 2016); *China Security Report 2016: The Expanding Scope of PLA Activities and PLA Strategy* (Tokyo: National Institute for Defense Studies, 2016), 62.

<sup>4</sup> "Army Commander: Eliminate the Mistaken Belief that 'Land Warfare Is Outdated and

the Army Is Useless,'" *People's Daily*, February 16, 2016, available at <<http://ah.people.com.cn/n2/2016/0216/c358316-27744249.html>>.

<sup>5</sup> "Army Commander Li Zuocheng: Construct a Strong, Modernized, New-Type Ground Force," *People's Daily*, January 31, 2016, available at <<http://sn.people.com.cn/n2/2016/0131/c358036-27662181.html>>; "Innovation in Military Theory Requires Avoiding Both 'Large Army' and 'Ground Forces Are Useless' Mentalities," *People's Daily*, February 23, 2016, available at <<http://military.people.com.cn/n1/2016/0223/c1011-28142430.html>>.

<sup>6</sup> See Michael A. Glosny and Phillip C. Saunders, "Correspondence: Debating China's Naval Nationalism," *International Security* 35, no. 2 (Fall 2010), 161–164.

<sup>7</sup> Andrew Scobell et al., eds., *The People's Liberation Army and Contingency Planning in China* (Washington, DC: NDU Press, 2015); Paul B. Stares, *Managing Instability on China's Periphery* (Washington, DC: Council on Foreign Relations, 2011).

<sup>8</sup> David M. Finkelstein, "China's National Military Strategy: An Overview of the 'Military Strategic Guidelines,'" in *Right-Sizing the People's Liberation Army: Exploring the Contours of China's Military*, ed. Roy Kamphausen and Andrew Scobell (Carlisle, PA: Strategic Studies Institute, 2007), 110.

<sup>9</sup> Mark A. Cozad, "The PLA and Contingency Planning," in *The People's Liberation Army and Contingency Planning in China*, 20.

<sup>10</sup> James C. Mulvenon, *Chairman Hu and the New Historic Missions*, China Leadership Monitor, No. 27 (Stanford, CA: Hoover Institution, January 9, 2009), available at <<http://media.hoover.org/sites/default/files/documents/CLM27JM.pdf>>.

<sup>11</sup> Oriana Mastro, "China's Military Is About to Go Global," *The National Interest*, December 18, 2014.

<sup>12</sup> See Phillip C. Saunders and Isaac Kardon, "Reconsidering the PLA as an Interest Group," in *PLA Influence on China's National Security Policymaking*, ed. Phillip C. Saunders and Andrew Scobell (Stanford, CA: Stanford University Press, 2015), 46.

<sup>13</sup> State Council Information Office of the People's Republic of China, "China's Military Strategy," May 2015.

<sup>14</sup> *Ibid.*; *Science of Military Strategy* [战略学] (Beijing: Academy of Military Sciences, 2013).

<sup>15</sup> Elsa Kania and Kenneth Allen, *The Human and Organizational Dimensions of the PLA's Unmanned Aerial Vehicle Systems*, China Brief 16, no. 8 (Washington, DC: The Jamestown Foundation, May 11, 2016).

<sup>16</sup> Dennis J. Blasko, *The Chinese Army Today* (New York: Routledge, 2012); James C. Mulvenon, "The PLA Army's Struggle for Identity," in *The People's Liberation Army and China in Transition*, ed. Stephen J. Flanagan and Michael E. Marti (Washington, DC: NDU Press, 2003).

<sup>17</sup> The changing language describing the relationship between mechanization and informatization in Chinese defense white papers is a good proxy for the status of the debate. See *China's National Defense in 2004* (Beijing: State Council Information Office, 2004), available at <<http://fas.org/nuke/guide/china/doctrine/natdef2004.html>>.

<sup>18</sup> Dennis J. Blasko, "Clarity of Intentions: People's Liberation Army Transregional Exercises to Defend China's Borders," in *Learning by Doing: The PLA Trains at Home and Abroad*, ed. Roy Kamphausen, David Lai, and Travis Tanner (Carlisle, PA: Strategic Studies Institute, 2012), 198.

<sup>19</sup> "Army Headquarters Begins to Develop Education on Reform Topics," *Jiefangjun Bao*, January 5, 2016, available at <<http://cpc.people.com.cn/n1/2016/0105/c64387-28014384.html>>.

<sup>20</sup> Note that Lieutenant General Zhu Fuxi, political commissar of the Western Theater Command, is nominally an air force officer but spent most of his career in the ground forces.

<sup>21</sup> Zhang Shibo and Liu Yazhou, "Strive to Build a Supreme Military Academy That Attains the World's Advanced Standards and Boasts Unique Chinese Characteristics—On Deeply Studying and Implementing the Important Speech by Chairman Xi During His Inspection of the National Defense University," *Jiefangjun Bao*, April 18, 2016, 6.



President Obama and President Xi Jinping walk on grounds of Annenberg Retreat at Sunnylands, in Rancho Mirage, California, before their bilateral meeting, June 8, 2013 (White House/Pete Souza)



# China's Military Reforms

## An Optimistic Take

By Michael S. Chase and Jeffrey Engstrom

China is implementing a sweeping reorganization of its military that has the potential to be the most important in the post-1949 history of the People's Liberation Army (PLA).<sup>1</sup> Xi Jinping, who serves as China's president, general secretary of the Chinese Communist Party, and chairman of the Central Military Commission (CMC), seeks to transform the PLA into a

fully modernized and "informatized" fighting force capable of carrying out joint combat operations, conducting military operations other than war (MOOTW), and providing a powerful strategic deterrent to prevent challenges to China's interests and constrain the decisions of potential adversaries. Scheduled for completion by 2020, the reforms aim to place the services on a

more even footing in the traditionally army-dominated PLA and to enable the military to more effectively harness space, cyberspace, and electronic warfare capabilities. Simultaneously, Xi is looking to rein in PLA corruption and assert his control over the military.

### Brief Overview of the Reforms

China unveiled the long-anticipated organizational reforms in a series of major announcements beginning on December 31, 2015, when it subordinated the ground force to an army

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service headquarters, raised the stature and role of the strategic missile force, and established a Strategic Support Force (SSF) to integrate space, cyber, and electronic warfare capabilities. On January 11, 2016, Xi announced “a dramatic breakthrough . . . in the reform of the military leadership and command system” that discarded the PLA’s four traditional general departments in favor of 15 new CMC functional departments.<sup>2</sup> Next, the reorganization eliminated China’s seven military regions (MRs) and converted them into five theater commands. This part of the restructuring is intended to enhance the PLA’s readiness and strengthen its deterrence and warfighting capabilities. In addition, the CMC released a “guideline on deepening national defense and military reform,” which states that under the new system, the CMC is in charge of overall administration of the PLA, People’s Armed Police, militia, and reserves; the new joint war zone commands focus on combat preparedness, and the services are in charge of development (presumably of personnel and capabilities).

### Likely Benefits of the Reforms

The reforms are likely to offer benefits in several areas, including achieving enhanced jointness, optimizing organizational structures for combat, and ensuring information dominance.

**Achieving Enhanced Jointness.** One important aspect of the reforms is that the ground force is becoming a real service. Historically, the PLA’s ground service component lacked a headquarters and instead dominated the entire military by controlling all four of the PLA’s general departments, which doubled as its de facto headquarters. Under the new system, however, the army will now possess its own headquarters—referred to as the PLA Army Leading Organ—and will be on par with the PLA’s naval, air, and newly formed strategic missile service.

The main goals in this respect appear to be to reduce army domination and improve the PLA’s jointness. To this end, giving the ground force its own headquarters appears to be an important step

in the direction of positioning the PLA away from the dominance of army-centric thinking and leadership. It also emphasizes the contributions of other services, and, along with the reduction of 300,000 troops Xi announced in September 2015, it likely cuts fat and frees resources to build air force, rocket force, and navy capabilities.<sup>3</sup> Another benefit of the ground force focusing more heavily on its own requirements rather than those of the entire PLA could be accelerating efforts to transform it into a leaner force more capable of carrying out joint combat operations and MOOTW.

**Optimizing Organizational Structures for Combat.** The second major benefit of the reforms derives from the elimination of MRs and their replacement with theater commands. The purpose of reorganizing the military regions into a smaller number of theater commands is to improve the PLA’s ability to prepare for and execute modern, high-intensity joint military operations. For many years, PLA officers have perceived the old MR-based command structure as outdated and not well suited to winning the kinds of conflicts they think the PLA may need to be prepared for in the future.

Theater commands now directly focus on the specific strategic directions determined by potential external threats. Instead of two MRs dealing with a hypothetical India conflict, there is now one. Instead of three MRs bordering Russia, there are now only two, and one shares only an approximately 30-mile border. In this way, the external threat environment arguably has shaped the development of the theaters in a profound way that never appeared to be a rationale for any of the previous and varied configurations of MRs since the founding of the PRC. Seams, however, still exist. The Sino-Vietnamese border region appears unchanged by this restructuring, with two theater commands replacing two military regions.

Transition from peacetime to wartime command will be easier. Under the former system, the MR commander was not necessarily the wartime theater commander. This individual would likely be appointed by the CMC and sanctioned

to set up a theater that might span multiple MRs.<sup>4</sup> Under the new system, the theater command for wartime is already stood up. The theater command is the “top joint operational commanding institution,” and therefore the theater commander is also the joint forces commander.<sup>5</sup> The theater commander and his staff presumably are already keenly attuned to the particular threats in their command and, other than potential relocation to a wartime command post, are immediately ready to prosecute a conflict with forces currently existing within the theater command and those that may have been sent from other theater commands.

In addition, the theater command structure allows the PLA to truly implement the active defense strategy as a preemptive posture. The former system of enacting wartime theaters placed a premium on China either starting a conflict itself or anticipating conflict well before it occurred. Conflict or aggression that was either unforeseen or occurred with little lead time immediately placed China into a reactive and defensive posture. Early iterations of the People’s War strategy recognized China’s own limitations in its ability to fight technologically superior adversaries under these circumstances, tacitly accepting that potential invaders would necessarily encroach upon China’s territorial sovereignty. Though substantial military modernization efforts by the PLA over the last few decades had already rendered Maoist doctrine on this topic moot, the theater command structure provides the required organizational framework to enact an active defense posture.

**Ensuring Information Dominance.** A third major benefit could be realized if the creation of the Strategic Support Force—which is responsible for cyber, space, electronic warfare, and intelligence, surveillance, and reconnaissance—offers improved flexibility and responsiveness that enhance the PLA’s ability to fight multi-domain conflicts. This recognizes the need for such forces, places them within a clear command structure, and likely provides additional resources and intra-service stature (from a general staff department to a force).



Anti-corruption campaign began after conclusion of 18<sup>th</sup> National Congress of the Communist Party of China held in Beijing, November 2012 (Dong Fang)

Indeed, this may be the least surprising change, as the emphasis on information warfare has captured the attention of the PLA since at least the mid-1990s. The current conception of “winning informationized local wars” recognizes the centrality of information and the information domain as a battlefield in modern warfare. The creation of such forces is driven by the reality that national-level assets must perform many information functions in warfare. Furthermore, it would be unrealistic and unnecessary to recreate many of these functions and capabilities under each theater command. Lastly, many of the SSF’s capabilities in the cyber and space domains, if used, could be extremely escalatory. For all of these factors, the SSF appears to be directly (and appropriately) subordinate to the CMC rather than a theater command or service. However, it appears likely that units within the theaters will be under operational control of the theater commander.<sup>6</sup>

### Success Likely Despite Expected Opposition

Xi’s anti-corruption campaign is part of an effort aimed at strengthening party (and his own) control over the PLA. When Xi assumed power in November 2012, he vowed to fight both “tigers” and “flies”—a reference to taking on corrupt leaders at the highest levels as well as lower level bureaucrats engaged in corrupt practices throughout the Chinese system, and the PLA would be no exception. The first shot over the bow came against the tigers. In 2014, Xi arrested a former CMC vice chairman, Xu Caihou, for participating in a “cash for ranks” scheme. After expelling Xu from the party, Xi followed up in 2015 with the arrest and purge of another former CMC vice chairman, Guo Boxiong, on similar charges. The arrests were unprecedented in that Xu and Guo were the two highest-ranking officers in China’s military when they

served as CMC vice chairmen, and their arrests marked the first time the PLA’s highest-level retired officers faced corruption charges. As of early March 2016, Xi’s anti-corruption campaign had reportedly resulted in the arrest of at least 60 military officers, although the actual numbers could be higher.

Another reflection of Xi’s determination to strengthen his control came when he drew a direct line between the era of Mao Zedong and the present at a major meeting in November 2014. In commemoration of the 85<sup>th</sup> anniversary of the “Gutian Congress,” at which Mao first affirmed the “party’s absolute control over the military” in 1929, Xi convened 420 of his most senior officers to meet in the small town of Gutian in southeastern Fujian Province.<sup>7</sup> This was believed to be the first time a PRC leader reconvened military leadership at Gutian since Mao’s famous meeting there—symbolism that was certainly not lost on the top brass.

Prior reading material reportedly reaffirmed the unassailable and preeminent position the party has over the military. This set the stage for Xi to implicitly convey to all in attendance that they too could become victims of his anti-corruption campaign, just as General Xu had a few months earlier, if they refused to toe the line. Indeed, the anti-corruption campaign is probably the most important source of Xi's power over the PLA.

## Unanswered Questions

While the reorganization appears to offer a number of important benefits to the PLA, several important questions remain unanswered. These include:

- What impact will the anti-corruption campaign have on military effectiveness? Specifically, is it weeding out the bad apples, or does it have a chilling effect on potentially dynamic senior officers that the PLA will need if it is to be successful in fighting and winning wars?
- Will ground force personnel continue to dominate most of the top positions in the PLA even under the reforms, or will this change over the next several years as a result of future retirements and promotions under the reforms? For example, will a PLA Navy, PLA Air Force, or PLA Rocket Force officer serve in a position such as commander of one of the new theater commands or director of the new Joint Staff Department under the CMC?
- Does the focus on the reorganization and changes such as reshuffling of former MR commanders to new theaters cast doubt on the PLA's ability to prosecute conflict at its borders, at least in the short run?
- Can the PLA ever move from a system of personal power bases/loyalty structures to one of a highly functional bureaucracy in which such dynamics matter very little or not at all?

## Conclusion

Xi Jinping has ordered the PLA to embark on a sweeping reorganization

aimed at transforming it into a leaner and more modern military that is more capable of carrying out joint operations. There are clear indications that Beijing expects some internal opposition to the reorganization, but Xi Jinping's unprecedented anti-corruption campaign probably gives him the leverage he needs to overcome entrenched opposition. The reorganization will have a major impact on the PLA's ability to prepare for and execute its main functions of strategic deterrence, combat operations, and MOOTW.

Importantly, despite some speculation to the contrary, Xi's assertion of control over the military in the form of the anti-corruption campaign and organizational reforms is more likely to enhance than it is to impede the PLA's ongoing modernization efforts. Part of Xi's "China Dream" is to produce a strong military capable of deterring or, if necessary, taking on powerful potential adversaries, including even the United States.

Xi not only wants a PLA that demonstrates utmost loyalty to the party, but he also wants a far more competent and operationally capable PLA by 2020, one that is commensurate with China's status as a major world power and capable of protecting China's regional and global interests. If his aspirations are realized, Xi's reformed PLA will soon be capable of posing an even more potent challenge to China's neighbors and to U.S. objectives and strategy in the region. JFQ

## Notes

<sup>1</sup> See, for example, Phillip C. Saunders and Joel Wuthnow, *China's Goldwater-Nichols? Assessing PLA Organizational Reforms*, Strategic Forum 294 (Washington, DC: NDU Press, April 2016), available at <<http://ndupress.ndu.edu/Portals/68/Documents/stratforum/SF-294.pdf>>; and Kenneth W. Allen, Dennis J. Blasko, and John F. Corbett, Jr., *The PLA's New Organizational Structure: What is Known, Unknown and Speculation (Part 1)*, China Brief 16, no. 3 (Washington, DC: The Jamestown Foundation, February 4, 2016).

<sup>2</sup> Prior to the reorganization, these were the General Staff Department, General Political Department, General Logistics Department, and General Armaments Department. These new functional departments under the Central

Military Committee (CMC) include the General Office, Joint Staff Department, Political Work Department, Logistic Support Department, Equipment Development Department, Training and Administration Department, National Defense Mobilization Department, Discipline Inspection Commission, Politics and Law Commission, Science and Technology Commission, Office for Strategic Planning, Office for Reform and Organizational Structure, Office for International Military Cooperation, Audit Office, and Agency for Offices Administration.

<sup>3</sup> Evidence of this is having an immediate trickledown effect on the enrollment at the PLA's military schools; one newspaper article reports that schools focusing on ground force competencies such as infantry and artillery will see a reduction in admission of 24 percent whereas aviation, missile, and naval schools will increase admissions by 14 percent. See "PLA Restructuring Changes Focus at Military Schools," *China Daily*, April 28, 2016.

<sup>4</sup> This individual could be a commander of one of the military regions adjacent to conflict as it was with Xu Shiyou and Li Desheng for the Southern and Northern Theaters, respectively, during the 1979 Sino-Vietnamese War, or the CMC could appoint a senior general officer from another command entirely, as it did with Peng Dehuai during the Korean War.

<sup>5</sup> "Spokesperson: PLA's Theater Command Adjustment and Establishment Accomplished," *China Military Online*, February 2, 2016.

<sup>6</sup> Saunders and Wuthnow, 3.

<sup>7</sup> James C. Mulvenon, "Hotel Gutian: We Haven't Had That Spirit Here Since 1929," *China Leadership Monitor*, no. 46 (Winter 2015).



Littoral combat ship USS *Fort Worth* conducts routine patrols in international waters of South China Sea near Spratly Islands as People's Liberation Army Navy guided-missile frigate *Yancheng* sails close behind, May 11, 2015 (U.S. Navy/Conor Minto)



# Chinese Military Reforms

## A Pessimistic Take

By Roger Cliff

On the evening of May 21, 1941, the German battleship *Bismarck*, escorted by the heavy cruiser *Prinz Eugen*, departed the Norwegian port of Bergen, intending to conduct commerce raiding against Allied merchant shipping in the Atlantic Ocean. The *Bismarck* was the world's largest warship in operation at the time and

proved to be virtually unsinkable by naval gunfire; it ultimately absorbed more than 400 direct hits from naval guns, roughly a quarter of which were main battery rounds from other battleships, without sinking. And yet less than 6 days into its first combat mission, the *Bismarck* had nonetheless been sunk. Better armor or a more powerful armament might have made the *Bismarck* even more dangerous and difficult to sink, but would not have prevented it from being sunk. Similarly,

recent changes to the organizational structure of China's military have made clear improvements, but do nothing to address its most important weaknesses.

### Recent Changes

Over the past few months the leadership of China's military has announced several major changes to the organizational structure of the People's Liberation Army (PLA). One change has been the dismantling of the four "general departments" that formerly served as both the

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headquarters of the PLA Army (PLAA) and as a joint staff for the entire military. Most joint staff-type functions have been moved to the Central Military Commission (CMC) while a separate PLAA headquarters has been created, comparable to the headquarters of the PLA Navy, Air Force, and Rocket Force (formerly known as the Second Artillery Force), to oversee the PLAA. In addition, the Rocket Force has been elevated in stature from an independent branch (兵种) to a full-fledged service (军种). A new organization, the Strategic Support Force (战略保障部队), has been created and is apparently independent of the four services, although precisely how it will be organized and function are unclear as of this writing.

The other major area of organizational change has been the replacement of the former seven military region commands (军区) by five theater commands (战区). Aside from the enlarged geographic areas of responsibility, a key difference between the new theater commands and old military region commands is that the former are explicitly designed to be joint headquarters similar to the geographic combatant command headquarters of the U.S. military. Under the old system, although the commanders of the military region air forces (MRAFs) and, if applicable, PLA Navy fleets who were based in a military region were deputy commanders of the military region, the MRAFs and fleets themselves were not subordinate to the commander of the military region but rather to the headquarters of the PLA Air Force and Navy. Now each theater command has established a joint command post and, presumably, at least in a small-scale contingency, the PLA Air Force, Navy, and Rocket Force forces in a region would be under the command of the theater commander.

## Assessment

These changes have rightly been recognized as significant steps toward resolving some longstanding problems caused by the PLA's previous organizational structure, particularly in the area of "jointness." Creating a separate PLAA headquarters and moving the joint

staff functions previously performed by the general departments to the CMC eliminate the inherent institutional bias caused by having a single organization responsible for both PLA army specific and joint functions. Elevating the PLA Rocket Force to the level of a full-fledged service increases its stature and influence relative to the other services in general and helps counterbalance the PLAA dominance in particular. The creation of the Strategic Support Force may further dilute the influence of the army. And creating theater commands, in the place of collections of single-service organizations that just happen to be located in the same place, means that the PLA can now conduct truly joint operations at the theater level.

These changes have rightly been recognized as insufficient to achieve true jointness. The key remaining obstacle is continued army dominance of PLA command organizations, even if those organizations are now officially joint. Once reason for this is that even if all 300,000 troops to be eliminated from the PLA, as announced in September 2015, are members of the army, more than half of the remaining PLA personnel will still be army personnel. Thus everything else being equal, on average more than half the qualified personnel available to fill positions in joint organizations will be from the army. Continued army dominance appears to be the result of more than just the numbers of available personnel, however, as all the commanders and four of the five political commissars of the ostensibly joint theater commands are PLAA officers.<sup>1</sup>

Even if the dominance of the PLAA is gradually reduced over time, however, the PLA faces more serious challenges than a lack of jointness, and the recent organizational changes do nothing to resolve these challenges and, in some cases, make them worse.

The PLA has made significant improvements in many areas over the past two decades in an effort to transform itself into an effective, modern fighting force. These improvements have been greatest in the areas of personnel quality, weaponry, and training. Nonetheless,

fundamental flaws remain that, in a conflict, would likely prevent the PLA from effectively employing its weaponry, personnel, and training. Most crucially, the operational doctrine of the PLA is inconsistent with both its organizational culture and its organizational structure.

## Organizational Structure

Organizational theorists use several general characteristics to describe an organization's structure. One is *organizational height* (that is, the number of organizational layers between the lowest ranking person and the highest ranking person in an organization). To operate at maximum efficiency, an organization should have the smallest number of layers needed to ensure that supervisors at each level have no more direct subordinates than they can adequately manage. The optimal height of a specific organization depends on its size and the nature of its activities, but in general adding organizational layers tends to reduce efficiency. In this regard the PLA's recent structural changes do not appear to have made a significant difference. One organizational level, the general departments, was eliminated, but their functions were simply moved up to the CMC—in effect adding a layer to the CMC's chain of command—and horizontally, in the creation of the PLAA headquarters. Comparison with the U.S. military, however, suggests that the PLA's structure is not overly "tall." The PLA has roughly the same number of organizational layers between top commanders and frontline troops, even though the PLA will have roughly 50 percent more personnel than the U.S. military even after the current round of troop reductions. Thus, there does not appear to be a need for the PLA to eliminate organizational layers.

Other characteristics used to describe an organization's structure are its degrees of centralization, standardization, and horizontal integration. The type of organization that is optimal for a military in these dimensions depends on the nature of its operational doctrine. If the military's doctrine emphasizes maneuver and indirection, such as the





Marines, assigned to 31<sup>st</sup> Marine Expeditionary Unit, fire M4 service rifles during exercise on flight deck of USS *Bonhomme Richard*, currently under way conducting operations in U.S. 7<sup>th</sup> Fleet area of responsibility, February 10, 2015 (U.S. Navy/Matthew Dickinson)

Israeli military and German army during the early part of World War II, then it needs an organization that is decentralized, has a low degree of standardization (that is, allows its personnel to deviate from standard practices as the situation warrants), and has a high degree of horizontal integration so that field commanders can coordinate directly with their local counterparts in other units and services without having to get approval all the way up and down their respective chains of command. But if the military has a doctrine that emphasizes direct engagement (that is, defeating an enemy through direct assaults on his main forces, such as most of the U.S. and Soviet armies during World War II), then it needs an organization that is highly centralized, has a high degree of standardization, and has a low degree of horizontal integration.

Since 1999 the PLA has had a doctrine that emphasizes indirection and

maneuver. Authoritative PLA publications advocate avoiding directly engaging an adversary's main forces and instead conducting "focal point" strikes on targets such as command and control centers, information systems, transportation hubs, and logistics systems, with the goal of rendering the adversary "blind" and "paralyzed." The transient and unpredictable nature of opportunities to attack such targets means that effectively implementing this doctrine requires an agile organization that is decentralized, has a low degree of standardization, and has a high degree of horizontal integration. By all accounts, however, the PLA has precisely the opposite type of organization. The PLA is highly centralized, with low-level officers and enlisted personnel having limited authority to make their own decisions. The PLA is highly standardized, with minimal latitude for individuals or sub-organizations to deviate from prescribed practices. And

the PLA has low levels of horizontal integration, with most personnel spending their entire careers within a single chain of command and most units having only infrequent contact with units outside their chain of command. Thus there is a fundamental incompatibility between the nature of the PLA's doctrine and its organizational structure.

The recent structural changes to the PLA have done little to alter this incompatibility. The joint command posts set up in each theater employ tens of personnel drawn from each of the services. For many of these personnel, working in the command post will be the first time they have had to work with personnel from another service. If the average term of assignment to a joint command post lasts, for instance, 3 years, then in 15 years' time there may be several thousand PLA members, mostly officers, who are experienced working with personnel from other services and branches. This will expand



their personal networks beyond their own chains of command and strengthen their ability to communicate and coordinate their actions with members of other branches and services. These will represent a tiny percentage of the several hundred thousand officers and two million members of the PLA, however, and will not address the fact that, unless current PLA personnel practices change, the vast majority of PLA members will not have experience working in, or with, another *division*, much less a unit in a different military region or service than the ones in which they have spent their entire career.

Other aspects of the recent structural changes, moreover, are designed to *increase* the centralization of the PLA, not decrease it. Abolishing the general departments and moving their functions to the CMC, although this does not change the number of organizational layers between them and the commander of the China's armed forces (President and CMC Chairman Xi Jinping), will tend to have the effect of increasing central control over these functions. In addition, the PLA has adopted a "CMC chairmanship responsibility system," under which "all significant issues in national defense and army building" will be "planned and decided by the CMC chairman," as compared to previously, when senior officers at the CMC, general departments, and military regions were allowed to make some of these decisions on their own.<sup>2</sup> The effects of this movement toward more centralized control at the upper levels of the PLA are likely to permeate down to lower levels, resulting in an organization that is even more centralized than previously. Thus the recent structural changes to the PLA have not only *not* resolved the fundamental inconsistency between its operational doctrine and its organizational structure, but they also have made the situation worse.

### Organizational Culture

The recent structural changes do not address another fundamental flaw in the PLA, which is an incompatibility between its operational doctrine and its organizational culture. Just as a military

with a doctrine that emphasizes maneuver and indirection needs an organizational structure that is decentralized, has low levels of standardization, and has high levels of horizontal integration, it needs an organizational culture that values initiative, innovation and creativity, adaptability and flexibility, and risk-taking. But these are among the qualities that are *least* valued by PLA organizational culture. The recent structural changes, moreover, the effects of which are to increase central control over the PLA, are likely to result in a further discouragement of initiative, innovation and creativity, adaptability and flexibility, and risk-taking. Thus, the recent structural changes have likely made this weakness of the PLA worse as well.

### Conclusion

The *Bismarck's* sinking resulted from a fundamental mismatch between its capabilities and those of what turned out to be the dominant platform for conducting naval warfare in 1941—the airplane. The *Bismarck* was unable to defend itself against attacks by a total of just 24 British torpedo bombers that resulted in three torpedo hits, one of which jammed the *Bismarck's* port rudder, rendering the ship unmaneuverable. Not only did the jammed rudder prevent the *Bismarck* from escaping the two British battleships and two heavy cruisers that were pursuing it, but it was also unable to return fire when they did. As a result, even though the British ships were unable to sink the *Bismarck* with gunfire, they were able to put its main armament out of action, set the entire ship aflame, and eventually sink it with torpedoes launched from close range. The recent changes to the organizational structure of the PLA will unquestionably improve its capabilities to conduct military operations, but without fundamental changes to its organizational structure and organizational culture or, alternatively, to its operational doctrine, the PLA will be unable to take full advantage of the considerable improvements it has made to its personnel, weaponry, and

training over the past two decades. This is not to say that the PLA would not be a dangerous and formidable foe for the armed forces of the United States or other nation. After all, the *Bismarck* sank a British battlecruiser and damaged a battleship before itself being sunk, but it would be a flawed giant, vulnerable to an adversary that can exploit its weaknesses. JFQ

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### Notes

<sup>1</sup> The fifth political commissar spent most of his career in the People's Liberation Army (PLA) before transferring to the PLA Air Force.

<sup>2</sup> See Phillip C. Saunders and Joel Wuthnow, *China's Goldwater-Nichols? Assessing PLA Organizational Reforms*, Strategic Forum 294 (Washington, DC: NDU Press, April 2016), 6, available at <ndupress.ndu.edu/Portals/68/Documents/stratforum/SF-294.pdf>.



Chinese Su-27 Flanker fighter makes fly-by at Anshan Airfield, China, March 24, 2007 (DOD/D. Myles Cullen)

# PLA Reforms and China's Nuclear Forces

By David C. Logan

China is in the midst of sweeping military reforms that will affect the force structure, administration, and command and control mechanisms of the People's Liberation Army (PLA). The reforms have the dual goals of tightening political control and improving the military's ability to conduct joint operations. Among the major steps is the creation of the new PLA Rocket Force, which replaced the former Second Artillery in controlling China's nuclear forces and land-based ballistic and cruise missiles. Despite much attention paid to its new name and higher organizational status, the

Rocket Force appears to be the service least affected by the reforms.

## PLA-Wide Reforms

The Rocket Force's creation did not occur in isolation, but in the context of reforms that affected the missions and command arrangements for nearly all the Chinese military. The scope and significance of PLA reforms have been likened to those of the Goldwater-Nichols Department of Defense Reorganization Act of 1986.<sup>1</sup>

The Rocket Force was created alongside other new organizations, including a PLA Army (PLAA) headquarters and the

Strategic Support Force. Establishment of a separate headquarters will move the PLAA to a bureaucratic structure and status equivalent with the other services and ostensibly reduce army dominance within the PLA. Most senior positions within the new theater commands and the restructured Central Military Commission (CMC), however, are staffed by PLAA officers, so the effectiveness of this change remains to be seen.<sup>2</sup> The exact role and mission of the Strategic Support Force are still unclear but have been described as "the core of China's information warfare force" and appear to have control over a range of space, cyber, electronic warfare, and communications capabilities.<sup>3</sup> The Strategic Support Force has reportedly also been tasked with collaborating with industry to develop more high-tech capabilities.<sup>4</sup>

The PLA also replaced its old system of seven military regions (MRs) with five new theater commands. Under the old system, the air force, navy, and Second Artillery maintained peacetime control of their units, with command and control of air force and navy assets transferring to the war zone commander in the event of actual conflict.<sup>5</sup> By contrast, theater commanders will command ground, naval,

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and air forces assigned to their theaters during peace and war. The relationship between the services and the theater commands appears similar to the U.S. arrangement, with the services responsible for organizing, training, and equipping units as a “force provider” and the theater commands responsible for operational planning and execution.<sup>6</sup>

Experts have suggested a number of drivers for the recent reforms.<sup>7</sup> Reshuffling the PLA’s bureaucratic and administrative functions could be an attempt to eliminate corruption within the force and to enhance political control of the military. Operationally, the reforms appear aimed at creating a force better able to conduct the joint operations needed to “fight and win informationized local wars.” The upgrading of the Second Artillery to the Rocket Force is one piece of these broader reforms.

### The Former Second Artillery

The Second Artillery was created in 1966, just 2 years after China’s first successful nuclear test at Lop Nor.<sup>8</sup> Though work had begun on China’s missile systems a decade earlier, the Second Artillery was given responsibility for wielding these weapons. It was not an official military service (*junzhong*), but rather an “independent branch [*bingzhong*] that is considered equal to the services.”<sup>9</sup> Though the Second Artillery gradually attained most of the trappings of a full-fledged service, its official organizational status remained “one-half notch lower in bureaucratic rank.”<sup>10</sup> In official documents, references to the Second Artillery were less common than to the services, and its personnel wore army uniforms.

The Second Artillery underwent a significant change in its mission and force structure over the last 25 years. Though it originally focused on nuclear missions, the 1990s saw the introduction of the first conventionally armed units. Today, it is estimated that China possesses more than 1,200 conventional missiles, compared to under 300 nuclear ones.<sup>11</sup> Along with the rapid growth of its conventionally armed forces, the Second Artillery conducted an extensive modernization of

China’s nuclear program, moving from first-generation, silo-based, liquid-fueled, single-warhead missiles to an arsenal increasingly featuring road-mobile, solid-fueled missiles, some capable of carrying multiple warheads. China has also begun to develop and deploy a ballistic missile submarine (SSBN) force, though it is unclear what, if any, relationship it has with China’s land-based nuclear forces.

Compared with the other services, the Second Artillery had distinctive command and control arrangements. Prior to the reforms, MR commanders did not exercise peacetime command over naval and air forces in their region; these units would be reassigned only to a war zone headquarters (usually led by an MR commander) during an actual conflict. In contrast, Second Artillery officers were not dual-hatted as MR deputy commanders. Both wartime and peacetime command and control were highly centralized from the CMC. Some have even described a “skip echelon” system in which superior levels of command can bypass intermediate command units and communicate directly with lowest-level units.<sup>12</sup> Under such a system, the CMC might communicate directly with launch brigades in the field.

### The Rocket Force: More Continuity than Change

While the reforms include dramatic changes in the command and control arrangements of the other services, the Rocket Force appears largely untouched. Reports have emphasized continuity both in China’s nuclear policies and in Rocket Force command and control arrangements.

**Nuclear Strategy and Policy.** Media reports and official statements consistently emphasize that the creation of the Rocket Force will not entail a change in China’s fundamental nuclear strategy, and especially not a change in its no-first-use policy. Reporting on the creation of the Rocket Force, a *China Daily* article stated that China’s nuclear policy would remain unchanged: “Reiterating the no-first-use nuclear weapons policy and the country’s defensive nuclear strategy, [Ministry of National Defense Spokesman] Yang [Yujun] said China always keeps its

nuclear capability at the minimum level required for safeguarding its national security.”<sup>13</sup> In describing the Rocket Force, China’s leader, Xi Jinping, used language identical to that applied to the Second Artillery in the past, describing the new Rocket Force as “a fundamental force for our country’s strategic deterrent, a strategic pillar for our country’s great power status, and an important cornerstone in protecting our national security.”<sup>14</sup> The same rhetorical formulation was repeated by Xi in his 2012 address to the Second Artillery, suggesting the fundamental role of the new Rocket Force will mirror that of its predecessor.<sup>15</sup>

### Operational Command and Control.

The military reforms have resulted in a significant change in theater command and control, moving the PLA toward a model resembling the relationship between the U.S. Services and the combatant commands, in which the services train and equip the military forces, which are then commanded by the theater commands (*zhanqu*) in actual operations.<sup>16</sup> This relationship is captured by the new 12-character phrase used to describe the new organizational relationships after the reforms: the CMC is responsible for overall force management, the theater commands are responsible for operations, and the services are responsible for force-building (军委管总, 战区主战, 军种主).<sup>17</sup> The command and control structures of the Rocket Force, again, appear largely unchanged.

First, mainland commentary on the Rocket Force has consistently emphasized the need for strong central control. In announcing the creation of the Rocket Force, media reports have reiterated the importance of centralized high-level command for strategic missile forces.<sup>18</sup> An article in *Rocket Force News* stated that the Rocket Force is “a strategic military service directly controlled and used by the Central Party Committee, the Central Military Commission, and Chairman Xi.”<sup>19</sup> These comments suggest that centralized command continues to extend not only to nuclear units but also conventional ones.

Second, reports about the relationship between the services and the theater commands are notable for the absence





People's Liberation Army Navy marines stand at attention following demonstration of brigade's capabilities (U.S. Marine Corps/J.J. Harper)

of references to the Rocket Force. For example, according to media reports, the new theater commands will have dedicated forces from the army, navy, and air force. However, those reports did not mention forces of the newly formed Rocket Force, suggesting that its units will remain with their home bases.<sup>20</sup> The theater commands are reported to have two deputy commanders from “each of the three service branches,” presumably not including the Rocket Force.<sup>21</sup> In addition, a report on the recent reforms and the role of the theater commands stated that “each Theater Command’s Army organ, Navy organ, and Air Force organ cadres must talk about how to deeply grasp the strategic intentions of Chairman Xi and the CMC.”<sup>22</sup> Though this makes reference to institutions that came into existence only after the reforms (the theater commands and theater commands’ army organs), the Rocket Force is notably absent.

Third, reports on training intended to improve the operational relationship

between the Rocket Force and theater commands emphasize *coordination* between the Rocket Force and theater commands, eschewing any language suggesting direct command authority from the theater command to Rocket Force units.<sup>23</sup> A mock order in a training drill used the word *coordinate* (*peibe*) to describe the unit’s activities in relation to the theater command’s units (*zhanqu budui*). A photo essay reporting on Rocket Force joint training hosted on the Web site of the newly created Southern Theater Command stated that Rocket Force units conducted operations “according to newly revised joint operations war plans with the relevant units of each of the other services,” again suggesting a role of independent support rather than command subordination.<sup>24</sup>

One indicator of the Second Artillery’s relative independence vis-à-vis the military regions was the fact that the command geography of the Second Artillery did not map directly onto the former MR borders. The Second Artillery

had six missile bases commanding launch brigades and a seventh responsible for nuclear warhead storage and handling. Of the six operational bases, four were believed to command launch brigades garrisoned in different military regions. For example, Base 51, headquartered in Shenyang, oversaw not only two nuclear-armed launch brigades garrisoned in the former Shenyang MR but also one nuclear-armed launch brigade garrisoned in the former Beijing MR and one conventionally armed launch brigade garrisoned in the former Jinan MR.<sup>25</sup> A similar command geography involving Rocket Force bases commanding brigades in multiple theater commands appears to be in place after the recent military reforms.<sup>26</sup>

A review of open-source references to Rocket Force Military Unit Cover Designators (MUCD) suggests there also has not been a change in which launch brigades are assigned to which missile bases. A change in MUCDs would imply a change in the number or organization of launch brigades. However, a review of

2016 Internet references to the MUCDs of Second Artillery units showed that the internal organizational structure of the Rocket Force's launch brigades mirrors that of the Second Artillery.

### Elevation to Independent Service

Much of the reporting on the new Rocket Force has focused on its new status as a service. Whereas the Second Artillery was an independent branch, the newly formed Rocket Force is a full-fledged military service on par with the others. This may lead to an expansion of both personnel and mission set.

In some respects, the formal elevation of the Rocket Force to the level of a service merely codifies its de facto status. The Second Artillery's organizational clout had steadily grown in the last 15 years. Prior to the creation of the Rocket Force, the Second Artillery commander and other Second Artillery senior leaders enjoyed ranks and grades equivalent to those of their counterparts in the services. In 2004, Jing Zhiyuan, then-commander of the Second Artillery, and his navy and air force counterparts became ex officio members of the CMC. Rocket Force representation on the CMC continues today under Commander Wei Fenghe. The Second Artillery had the same constellation of bureaucratic structures as the services, including a Political Department, Logistics Department, Armaments Department, and Command Academy.

Despite this trend, many reports on the new Rocket Force have emphasized the significance of the force's higher status as a service. Previous writings about the Second Artillery's role in joint campaigns noted that while strikes conducted by Second Artillery units would be central to the importance of any operation, the Second Artillery as an institution would largely play an auxiliary or supporting role to the services.<sup>27</sup> However, a professor at the Rocket Force Command Academy predicted that the new force would be able to "fight independently" rather than merely "support[ing] other forces, a definition that is incompatible with the Rocket Force's capacity and actual role."<sup>28</sup>

Rocket Force members have stressed the independence and prestige that come with its new status. The Rocket Force has reportedly already begun implementing the internal bureaucratic adjustments necessary to elevate it to the status of a full military service,<sup>29</sup> including a roll-out of new Rocket Force uniforms.<sup>30</sup> Internal Rocket Force reports highlight the fact that Chairman Xi personally chose the name of the Rocket Force and bestowed a new flag to the force.<sup>31</sup> An article published in *Rocket Force News* reflecting on the significance of the force's elevation to the level of a military service noted that "the status of the Rocket Force as a military service is getting more important than ever before."<sup>32</sup> The article predicted the Rocket Force would see changes in force structure, status, and missions. Specifically, "the value and the capability of the Rocket Force should lie in the strengthening of the credible and reliable nuclear deterrence and nuclear counterstrike capabilities referenced by Chairman Xi, along with strengthening the establishment of intermediate-range and long-range precision strike forces and enhancing counterbalancing abilities."<sup>33</sup>

A Rocket Force political instructor, writing about the reforms, stated that the elevation to the level of a military service would bring commensurate transformation of the force's structure and elevation of its mission, writing that the new status as a full-fledged service means that "the Rocket Force is no longer a paper tiger, placing missiles on launch platforms to scare the adversary, but rather is a strategic iron fist ready anytime to launch missiles to intimidate the enemy," perhaps suggesting a greater warfighting role for the force.<sup>34</sup>

### Implications

Despite the reform's emphasis on joint command and control arrangements, Rocket Force command and control appears to remain highly centralized and not delegated to theater commanders, which may hamper effectiveness in future joint campaigns. The greater institutional independence of the Rocket Force vis-à-vis both the theater commands and other services may exac-

erbate this problem. It may be difficult to coordinate the actions of Rocket Force missile brigades and those forces assigned directly to a theater command in a fast-moving crisis without clear command authorities and an integrated communications network. The need to coordinate with other services will likely grow as the conflict progresses. This could be especially relevant in any future Taiwan contingency or operations seeking to employ China's anti-access/area-denial assets, which would require significant coordination among China's air, sea, and missile forces.

The PLA could have mirrored the changes to navy and air force command and control arrangements by transferring operational control of Rocket Force conventional units to the theater commands while keeping nuclear units under the strict centralized control of the force. PLA leadership, however, clearly eschewed such a choice (or Second Artillery leaders were able to resist such efforts). Past attempts to place missile units within other services appear to have ended in failure. For example, in the late 1990s, an army artillery brigade was transformed into a short-range ballistic missile brigade armed with DF-11 missiles otherwise operated only by the Second Artillery.<sup>35</sup> A second similar brigade was formed sometime later. But in 2010, both of these brigades were transferred to the Second Artillery.<sup>36</sup>

PLA leadership might have decided that maintaining the current force structure exploits economies of scale and operational synergies. Some of the missile systems operated by the Rocket Force include both conventional and nuclear variants. Even missiles of different systems may share logistics, maintenance, and training requirements. Transferring control of conventional units to the theater commands would likely have required the creation of parallel and redundant structures. As one expert notes, "personnel, logistics, and training requirements for only two SRBM [short-range ballistic missile] brigades proved unwieldy for the army when most SRBM units are assigned to the Second Artillery."<sup>37</sup>

There may also be operational reasons for maintaining current command and control arrangements for conventional missile units. Theater commands leaders, who are all army officers, probably lack familiarity with missile operations and Rocket Force units. CMC leaders, including Xi Jinping, may also want to maintain tight central control over China's conventional and nuclear missile systems given their unique ability to strike targets abroad and potentially initiate a conflict due to carelessness or poor judgment. The accidental launch in July of a Taiwanese anti-ship missile that killed a fisherman provided a sobering reminder that such concerns are not merely academic.<sup>38</sup>

Elevation to a full-fledged service may give the Rocket Force the institutional prestige and resources necessary to compete effectively with the other services for resources and missions. As the PLA rebalances away from traditional army dominance and slower economic growth leads to slower growth in military spending, inter-service rivalry, and competition to control emerging missions will likely become more intense.

Conventional missions and forces may present such a "growth area" to the Rocket Force. With growing PLA emphasis on conducting joint conventional operations, the force might seek to push to expand its conventional forces and missions. While China's relatively restrained nuclear strategy may limit the growth potential of the nuclear mission, conventional operations can more easily be used to justify an expansion in force size and mission set. The Rocket Force may already have a strong internal orientation toward conventional missions. It reportedly already controls more than 1,200 conventional short-range ballistic missiles,<sup>39</sup> compared to an estimated 160 nuclear-capable ones, and it is estimated that more than half of personnel are assigned to conventional forces.<sup>40</sup> In the past decade, officers who comprise the Rocket Force senior leadership were most likely to have served in Base 52, the force's premier conventional base opposite Taiwan.

Conversely, the Rocket Force maintains a comparative advantage over the other services in the nuclear realm. Chinese leadership views about the limited utility of nuclear weapons and guidance to build a "lean and effective" nuclear deterrent imply a cap on the size of nuclear forces and the missions assigned to them.<sup>41</sup> However, the Rocket Force could seek to capitalize on its unique nuclear role in a number of ways. First, it could push China's leadership to expand the role of nuclear forces and argue for an expanded force structure and mission set in ways that could potentially lead to more aggressive changes in overall strategy and policy.<sup>42</sup>

The Rocket Force might also make a play for operational control of China's emergent fleet of *Jin*-class SSBNs. A number of Chinese and American experts have predicted that China's future SSBN force could fall under the command of the Rocket Force, though few have offered specifics about how such a command arrangement might work.<sup>43</sup>

The PLA Navy has little to no experience controlling nuclear weapons as China built only one hull of the previous-generation *Xia*-class SSBN, which never conducted a single operational patrol.<sup>44</sup> To the extent that greater operational experience with nuclear weapons increases confidence and decreases the likelihood of accidents, mistakes, and misperceptions, centralizing nuclear control under the Rocket Force might improve strategic stability by reducing the risk of accidental or unauthorized launch. Conversely, the Rocket Force has no experience running a naval fleet of any kind, let alone the kinds of complex operations required to operate and protect an SSBN force. Regardless of future command and control structures, Chinese SSBNs would undoubtedly be staffed and operated by PLA Navy crews and serviced in PLA Navy ports.

Finally, the Rocket Force could push to gain operational control of conventional strategic assets such as the DF-21D anti-ship ballistic missile or direct ascent anti-satellite capabilities. Both of these weapons are based on ballistic missile systems already operated by the Rocket

Force, and their importance as strategic assets argues for strict centralized control.

China's sweeping military reforms have ushered in substantial changes in the relative status and relationships between different parts of the People's Liberation Army. The Rocket Force has emerged as arguably the biggest winner in the reforms. The navy and air force lost operational control of their forces to the theater commands, and the army suffered a reduction in both formal status and administrative power after the dissolution of the General Staff Department. The Rocket Force, on the other hand, appears to have maintained direct control of both its conventional and nuclear units, while also boosting its formal organizational status and strengthening its ability to compete against the other services for resources and missions. JFQ

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## Notes

<sup>1</sup> Phillip C. Saunders and Joel Wuthnow, "China's Goldwater-Nichols? Assessing PLA Organizational Reforms," *Joint Force Quarterly* 82 (3<sup>rd</sup> Quarter 2016), 68–75.

<sup>2</sup> Kenneth Allen, Dennis J. Blasko, and John F. Corbett, Jr., *The PLA's New Organizational Structure: What is Known, Unknown and Speculation (Part 1)*, China Brief 16, no. 3 (Washington, DC: Jamestown Foundation, February 4, 2016), available at <[www.jamestown.org/single/?tx\\_ttnews%5Btt\\_news%5D=45069&no\\_cache=1#.V3-5Gf7yIMs](http://www.jamestown.org/single/?tx_ttnews%5Btt_news%5D=45069&no_cache=1#.V3-5Gf7yIMs)>. For an argument that the reforms may actually strengthen the status of the People's Liberation Army (PLA) Army, see Phillip C. Saunders and John Chen, "Is the Chinese Army the Real Winners in PLA Reforms?" *Joint Force Quarterly* 83 (4<sup>th</sup> Quarter 2016).

<sup>3</sup> John Costello, *The Strategic Support Force: China's Information Warfare Service*, China Brief 16, no. 3 (Washington, DC: The Jamestown Foundation, February 8, 2016), available at <[www.jamestown.org/single/?tx\\_ttnews%5Btt\\_news%5D=45075&no\\_cache=1#.V3-ptf7yIMs](http://www.jamestown.org/single/?tx_ttnews%5Btt_news%5D=45075&no_cache=1#.V3-ptf7yIMs)>.

<sup>4</sup> Ibid.

<sup>5</sup> Saunders and Wuthnow.

<sup>6</sup> U.S.-China Economic and Security Review Commission, Hearing on Developments in China's Military Force Projection and Expeditionary Capabilities, Testimony of David M. Finkelstein, January 21, 2016, 114<sup>th</sup> Cong. 2<sup>nd</sup> sess., transcript available at <[www.uscc.gov/sites/default/files/USCC%20Testimony%202016\\_Finkelstein.pdf](http://www.uscc.gov/sites/default/files/USCC%20Testimony%202016_Finkelstein.pdf)>.

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<sup>8</sup> Bates Gill, James C. Mulvenon, and Mark Stokes, "The Chinese Second Artillery Corps: Transition to Credible Deterrence," in *PLA as Organization*, ed. James C. Mulvenon and Andrew N.D. Yang (Santa Monica, CA: RAND, 2002), 517–518.

<sup>9</sup> Michael S. Chase, "The PLA's Second Artillery Force as a Customer of China's Defense Industry," *Study of Innovation and Technology in China*, Research Brief 2013-15 (January 2013), 2.

<sup>10</sup> Gill, Mulvenon, and Stokes, 520.

<sup>11</sup> *Military and Security Developments Involving the People's Republic of China 2016*, Annual Report to Congress (Washington, DC: Office of the Secretary of Defense, 2016); Hans M. Kristensen and Robert S. Norris, "Chinese Nuclear Forces, 2015," *Bulletin of the Atomic Scientists* 71, no. 4 (July 2015).

<sup>12</sup> Kenneth W. Allen and Jana Allen, *Building a Strong Informatized Strategic Missile Force: An Overview of the Second Artillery Force with a Focus on Training in 2014* (Washington, DC: The Jamestown Foundation, 2015), 26, available at <http://jamestown.org/uploads/tx\_jamquickstore/Building\_A\_Strategic\_Missile\_Force.pdf>.

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<sup>15</sup> "Xi Jinping: Building a Strong Informatized Strategic Missile Force," available at <http://news.xinhuanet.com/politics/2012-12/05/c\_113922221.htm>.

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<sup>17</sup> "Xi Jinping: Comprehensively Implement Strategy to Reform a Strong Military, Resolutely and Unwaveringly Go Down the Road of a Strong Military with Chinese Characteristics," *Xinhua Online*, November 26, 2015, available at <http://news.xinhuanet.com/politics/2015-11/26/c\_1117274869.htm>.

<sup>18</sup> Yu Jinzhi, "China's Second Artillery Force Renamed to Rocket Force, What's the Mystery Behind Not Adding the Word Strategic?" *Sina News*, January 1, 2016, available at <http://mil.news.sina.com.cn/china/2016-01-01/doc-ixfnept3524560.shtml>.

<sup>19</sup> Huang Jinxin, "My Views on the Rocket Force as a Strategic Military Service," *Rocket Force News*, January 13, 2016.

<sup>20</sup> Allen, Blasko, and Corbett.

<sup>21</sup> Choi Chi-yuk, "The Rising Star in China's Military Tipped as Future Air Force Leader," *South China Morning Post*, June 17, 2016, available at <www.scmp.com/news/china/diplomacy-defence/article/1976523/rising-star-chinas-military-tipped-future-air-force>. This would be consistent with the relationship between the Second Artillery and former military regions. Unlike the services, Second Artillery officers did not serve as deputy commanders within the military region, illustrating the unique "vertical command" structure of the Second Artillery. See Roger Cliff, *Shaking the Heavens and Splitting the Earth: Chinese Air Force Employment Concepts in the 21<sup>st</sup> Century* (Santa Monica, CA: RAND, 2014), 23.

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<sup>23</sup> Dan Qingwei, "Rocket Force Base Explores Standardization of Joint Operational Processes," *PLA Daily*, April 1, 2016, available at <http://military.people.com.cn/n1/2016/04/01/c1011-28243986.html>.

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<sup>25</sup> Information on Second Artillery base and brigade locations and Military Unit Cover Designators is from Jeffrey Lewis, *Paper Tigers: China's Nuclear Posture* (New York: Routledge, 2014), 116–121; and Fiona S. Cunningham and M. Taylor Fravel, "Assuring Assured Retaliation: China's Nuclear Posture and U.S.-China Strategic Stability," *International Security* 40, no. 2 (Fall 2015).

<sup>26</sup> Based on analysis of Rocket Force base and brigade locations and reported theater command boundaries.

<sup>27</sup> John W. Lewis and Xue Litai, "Making China's Nuclear War Plan," *Bulletin of the Atomic Scientists* 68, no. 5 (2012), 54.

<sup>28</sup> Zhang Zhouxiang, "Rocket Force to Protect National Interests," *China Daily*, January 5, 2016, available at <http://usa.chinadaily.com.cn/opinion/2016-01/05/content\_22933648.htm>.

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<sup>32</sup> Huang Jinxin, "My Views on the Rocket Force as a Strategic Military Service," *Rocket Force News*, January 13, 2016.

<sup>33</sup> Ibid.

<sup>34</sup> Li Xuan, "From 'Force' to 'Service,' Rocket Force Must Shoulder Historic Heavy Responsibility," *Science and Technology Daily*, February 23, 2016, available at <www.81.cn/depb/2016-02/23/content\_6923516.htm>.

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<sup>36</sup> Mark Stokes, "Expansion of China's Ballistic Missile Infrastructure Opposite Taiwan," *Asia Eye*, available at <http://blog.project2049.net/2011/04/expansion-of-chinas-ballistic-missile.html>.

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<sup>38</sup> Austin Ramzy, "Taiwan Navy Accidentally Fires Antiship Missile, Killing Fisherman," *New York Times*, July 1, 2016, available at <www.nytimes.com/2016/07/02/world/asia/taiwan-china-missile.html?\_r=0>.

<sup>39</sup> *Military and Security Developments Involving the People's Republic of China 2016*, 25.

<sup>40</sup> Hans M. Kristensen and Robert S. Norris, "Chinese Nuclear Forces, 2016," *Bulletin of the Atomic Scientists* 72, no. 4 (June 2016), 2; Jeffrey Lewis, "China's Belated Embrace of MIRVs," in *The Lure and Pitfalls of MIRVs: From the First to the Second Nuclear Age*, ed. Michael Krepon, Travis Wheeler, and Shane Mason (Washington, DC: Stimson Center, May 2016), 105.

<sup>41</sup> On China's nuclear strategy and views of nuclear weapons, see M. Taylor Fravel and Evan S. Medeiros, "China's Search for Assured Retaliation: The Evolution of Chinese Nuclear Strategy and Force Structure," *International Security* 35, no. 2 (Fall 2010); and Cunningham and Fravel.

<sup>42</sup> Lewis, "China's Belated Embrace of MIRVs," in *The Lure and Pitfalls of MIRVs*, 105.

<sup>43</sup> "Expert: Why Is the Second Artillery Being Elevated to the Rocket Force, the Fourth Military Service?" *Global Times*, January 9, 2016, available at <http://mil.huanqiu.com/observation/2016-01/8346721.html>; Kelsey Davenport, "China Elevates Nuclear Rocket Force," Arms Control Association, March 2016, available at <www.armscontrol.org/ACT/2016\_03/News/China-Elevates-Nuclear-Rocket-Force>.

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Chief of Naval Operations Admiral John Richardson visits Chinese People's Liberation Army Navy Submarine Academy, North Sea Fleet Headquarters, and a PLAN frigate and submarine in Qingdao, China, to improve mutual understanding and encourage professional interaction between U.S. and Chinese navies, July 20, 2016 (U.S. Navy/Nathan Laird)

# What Do China's Military Reforms Mean for Taiwan?

By Joel Wuthnow

In late 2015 and early 2016, China announced a sweeping set of reforms to the organizational structure of the People's Liberation Army (PLA).<sup>1</sup> Key changes included the following:

- The 4 semiautonomous general departments (responsible for operations, political work, logistics, and

armaments) were replaced by 15 departments directly under the Central Military Commission (CMC).

- At the service level, a new Strategic Support Force was set up to provide support in the electromagnetic, space, and cyber domains; a separate headquarters was established for the ground forces (which were previously collectively led by the general departments); and the Second Artillery Force, an independent branch responsible for China's conventional

and nuclear missiles, was upgraded to a full-fledged service and renamed the PLA Rocket Force.

- The seven military regions, responsible for administering forces at the regional level, were replaced with five "theater commands" aligned against specific land and maritime threats on China's periphery.

The reforms not only significantly altered the PLA's organizational structure but also redefined authority relationships among major components. The PLA

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Guided missile destroyer *Jinan*, top, frigate *Yiyang* and guided missile destroyer *USS Mason*, center, guided missile cruiser *USS Monterey* and guided missile destroyer *USS Stout*, bottom, steam in formation during passing exercise in Atlantic Ocean, November 7, 2015 (U.S. Navy/Edward Gutierrez III)

Air Force and Navy headquarters, which previously commanded operations during peacetime, were reassigned to administrative roles focused on training and equipping troops. Operational authority moved to a two-tiered system in which decisions will be made by the CMC and carried out by theater commanders.

In some ways, the new system is reminiscent of the U.S. military structure that developed following the passage of the Goldwater-Nichols Department of Defense Reorganization Act of 1986. That act similarly assigned the Services an “organize, train, and equip” function, while placing operations in the hands of regional combatant commands, such as the U.S. Pacific Command. Nevertheless, a key difference is that the PLA remains a “party army”—with a primary focus on defending the interests of the Chinese Communist Party (CCP)—not a national army, like the U.S. military, that serves the country’s interests regardless of which political party is in power. Thus, the PLA will continue to possess Leninist features that have no cognate in the U.S. system, such

as a CMC, political commissars, and party committees down to the regimental level.

Why did Chinese president Xi Jinping and his supporters in the PLA pursue this course of reform? There are both political and operational motivations. Politically, the reforms were designed to enhance the ability of the CCP to supervise the armed forces, which were seen as increasingly corrupt and undisciplined. The reforms thus go hand in hand with parallel efforts to weed out malfeasance through an anti-corruption campaign in the PLA that has already resulted in the dismissal of dozens of senior officers (including two former CMC vice chairmen, Xu Caihou and Guo Boxiong) and with efforts to strengthen Xi’s authority over the military in his role as CCP general secretary.

The reforms strengthen political control over the PLA in several ways. One reform, for instance, disbands the general departments, which were seen as too autonomous and riddled with corruption, and places their successor organizations directly under the CMC, where they can be more closely scrutinized. Another

strengthens auditing and discipline inspection functions, which allow the CMC to send investigators to units across the PLA to root out offenders. In addition, the new Political and Legal Affairs Commission was set up under the CMC to bolster the role of regulations and law enforcement in the PLA.

Operationally, the reforms are intended to increase the PLA’s ability to successfully conduct joint operations on a high-tech battlefield. Over the past two decades, Chinese military strategists have identified joint operations as a key to modern warfare. This recognition was due in part to the observations of U.S. battlefield success during the first Gulf War and other operations in the 1990s. Consequently, the PLA developed joint doctrine and carried out an increasing number of cross-service exercises.

The reforms help facilitate “jointness” in the PLA in several ways. The first way is by creating a joint command and control system that places operational authority in the hands of commanders at both the central level (in the new joint



staff department under the CMC) and the regional level (in theater commands). Second, the reforms established a separate ground force headquarters, freeing the CMC and theater commands to become fully joint organizations. Third, the reforms create a training management department at the CMC level that focuses on joint training. The fourth way is by giving theater commanders authority over almost all units in their respective areas of responsibility. This includes air, naval, and conventional missile forces, but probably not nuclear forces.

What does all this mean for Taiwan's security? There are several possible implications. First, in the near term the PLA is likely to face a degree of organizational disruption as new lines of authority are clarified, new leaders take their positions, and rank-and-file personnel seek to understand where they stand in the new organizational chart and what their roles will be. An added source of organizational stress will be a concurrent downsizing of the PLA, in which the Chinese military is slated to decrease from 2.3 million to 2 million servicemembers by late 2017. As a result, the PLA will be focused inward for the next few years, reducing its ability to fight a major war.

Second, over the longer term the PLA could build a more robust ability to conduct joint operations in multiple domains. The theater commands, in particular, will likely focus on joint training related to threats in their particular areas of responsibility. Regarding Taiwan, the Eastern Theater Command, based in Nanjing, will be responsible for planning and operations related to a Taiwan contingency. Theater commanders will be able to integrate units from the army, navy, air force, and conventional missile force into joint training and operations. The Eastern Theater commander could also probably draw on more support from the Strategic Support Force, which will be critical for pursuing operations in nontraditional domains of warfare, such as space and cyber. The result could be a better trained joint force that will pose an even greater threat to Taiwan's security.

Third, the PLA is working to create new and better trained leaders responsible for developing doctrine and conducting training and operations relevant to a Taiwan contingency. The PLA is already instituting professional military education reforms to complement its organizational restructuring, including a new curriculum focused on joint command at the PLA National Defense University.<sup>2</sup> New commanders will also rotate into key positions at both the CMC and theater levels. Some of these could be senior officers from the navy and air force, which would bring valuable new perspectives as the PLA seeks to build a more joint force. Moreover, the PLA will probably continue a tradition of sending its best and brightest officers to the theater responsible for Taiwan.

Fourth, the Chinese military will continue to allocate its most advanced equipment to the Eastern Theater Command, just as it sent its most capable hardware to the preceding Nanjing Military Region. The reforms could facilitate development of more advanced equipment, such as long-range precision-strike systems, by encouraging stronger civil-military cooperation in defense research and development and by instituting procurement and acquisition reforms. According to press reports, the Strategic Support Force will play a role in developing advanced capabilities. This could result in a PLA that is not only better trained but also better equipped to pursue operations in a Taiwan contingency.

Nevertheless, several obstacles could inhibit the PLA's ability to develop into a more credible joint force. First, at least for the next few years, the PLA will continue to be an organization dominated by the ground forces, with most key positions filled by army officers. This could inhibit the emergence of a true joint mentality within the PLA. Second, inter-service rivalry could pose issues as each service attempts to demonstrate and maintain its unique advantages. This might be particularly problematic in an increasingly budget-constrained environment. Third, the PLA's lack of combat experience (having not fought a major

war since 1979) means that it will not enjoy the advantage of testing its organization, doctrine, and equipment under real combat conditions.

In sum, the PLA's organizational reforms are clearly intended to allow China to field a stronger joint force capable of effectively conducting operations across the range of possible contingencies, including those related to Taiwan. If all goes according to plan, Taipei could face an adversary that is not only better organized, trained, and equipped but also more confident in its ability to fight and win wars under informationized conditions. Nevertheless, as the U.S. military has found in the 30 years following Goldwater-Nichols, developing a capable joint force takes years of trial and error. Whether and how successfully the PLA will overcome its own obstacles remain to be seen. JFQ

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## Notes

<sup>1</sup> Phillip C. Saunders and Joel Wuthnow, *China's Goldwater-Nichols? Assessing PLA Organizational Reforms*, Strategic Forum 294 (Washington, DC: NDU Press, April 2016), available at <ndupress.ndu.edu/Portals/68/Documents/stratforum/SF-294.pdf>.

<sup>2</sup> Zhang Shibo and Liu Yazhou, "Strive to Build a Supreme Military Academy That Attains the World's Advanced Standards and Boasts Unique Chinese Characteristics—On Deeply Studying and Implementing the Important Speech by Chairman Xi During His Inspection of the National Defense University," *Jiefangjun Bao*, April 18, 2016, 6.



Admiral Cecil D. Haney, Commander,  
U.S. Strategic Command (DOD)

provocative and destabilizing behavior by current and potential adversaries are making threats today transregional, multidomain, and multifunctional. Some nations are investing in long-term military modernization programs, including capabilities that could pose an existential threat to the United States. A number of others are developing, sustaining, or modernizing their nuclear forces, including weapons and platforms that are mobile, hardened, and underground.

Russia is engaged in destabilizing actions in Syria and Ukraine, developing counterspace and cyber capabilities, and aggressively pursuing other approaches such as hyper-glide vehicle technology. At the same time, it continues to modernize its nuclear forces, even though Russia faces some challenging economic conditions. Qualitative and quantitative advancements in capabilities that are not accountable under the New Strategic Arms Reduction Treaty [New START] and in nonstrategic nuclear weapon systems, some of which have ranges or payloads comparable to New START-accountable systems, are causes for concern. These destabilizing actions are taking place at the same time Russia is declaring and recklessly expressing its willingness to escalate if required. By virtue of the size of its nuclear arsenal, Russia poses an existential threat to the United States. Russia must understand that it would be a serious miscalculation to consider nuclear escalation as a viable option, and it will not achieve the benefits it seeks.

In the Indo-Asia-Pacific, China is making significant investments in developing its overarching military capabilities, both nuclear and conventional, as well as realignment of its command and control structure to better support its antiaccess/area-denial [A2/AD] campaign. It is also pursuing conventional prompt global strike capabilities and offensive counterspace technologies while exploiting computer networks. Perhaps equally disconcerting has been China's efforts to challenge territorial jurisdiction in the East and South China seas and its disregard for international norms and the recent ruling by the United Nations [UN] Convention on the Law of the

## An Interview with Cecil D. Haney

*JFQ: As you have led U.S. Strategic Command [USSTRATCOM] for the past few years, how do you view the threats and challenges your command faces?*

Admiral Cecil D. Haney, USN, is Commander of U.S. Strategic Command.

**Admiral Cecil D. Haney:** During my time at the command, the global security environment has become more complex, dynamic, and volatile—perhaps more so than any time in our history. The continued propagation of asymmetric methods, unprecedented proliferation of advancing technologies, and increasingly

Sea. Collectively, these actions only contribute to instability at a time of rapid globalization and increasing regional interconnectivity. These activities, coupled with China's lack of transparency, raise questions about its aspirations.

North Korea's coercive, irresponsible rhetoric and actions undermine regional stability. Kim Jong-un continues to defy international norms and violate multiple UN Security Council resolutions. North Korea's persistent attempts to launch submarine-launched ballistic missiles and intermediate-range ballistic missiles underline this irresponsible behavior. It continues its quest to obtain a nuclear-tipped missile capable of striking the United States and its allies and partners, launch satellites into space using ballistic missile technology, and conduct additional nuclear tests. As with Russia, North Korea must understand it cannot escalate its way to victory, and the United States will take actions to assure its allies in the region.

Iran's continued involvement in Middle East conflicts and development of ballistic missile programs and cyberspace capabilities require our attention. While today it appears that Iran is following the mandates of the Joint Comprehensive Plan of Action, we must remain vigilant for any shifts regarding nuclear ambitions.

Violent extremist organizations [VEOs] and terror groups are recruiting, financing, and operating across political, social, and cyberspace boundaries. Ungoverned or ineffectively governed regions remain incubators for those who seek to attack the world's peaceful societies. We must continue to address their threat to our way of life through all of our levers of power while working with the international community.

Lastly, I continue to be concerned about the U.S. defense budget. As I have testified, I am pleased with the President's budget request for fiscal year 2017, particularly in the areas of nuclear enterprise sustainment and modernization, space, cyberspace, and missile defense. It reflects the Nation's commitment to modernization, a key part of our deterrence strategy. But there is no margin to absorb new risk. With the

threat of sequestration looming in 2018, we cannot compromise the momentum we are establishing.

Our strategic capabilities must provide not only our adversaries a complex deterrence problem but also options to the President if deterrence were to fail. I must point out that sustaining and modernizing our strategic forces supports the President's nonproliferation goals, and modernization is in line with the 2010 Nuclear Posture Review, 2013 Nuclear Weapons Employment Strategy, 2014 Quadrennial Defense Review, and 2015 National Military Strategy. If we are to meet future challenges, we must have a synchronized campaign of investments supporting the full range of military operations that secure U.S. national security objectives. We need appropriations and operations for 2017, and we need relief from sequestration.

Due to the global nature of U.S. Strategic Command's Unified Command Plan-assigned missions, we have a significant role working with the other eight combatant commands and the inter-agency community to address each of the five evolving challenges facing the United States: Russia, China, North Korea, Iran, and VEOs. It has been my privilege to lead the Soldiers, Marines, Sailors, Airmen, and civilians who support these missions 24 hours a day, 7 days a week, 365 days a year.

*JFQ: Can you describe the relationship between the United States and Russia today, specifically your views of their nuclear and conventional force buildups, the role of missile defense, and the prospects for arms control agreements in the future?*

**Admiral Haney:** The relationship between the United States and Russia is complex and multifaceted. It's informed by both recent and distant historic events and differing worldviews between the two nations. Russia continues to challenge the international order, engaging in destabilizing actions in Syria and Ukraine. It is developing systems that breach the bounds of the Intermediate-Range Nuclear Forces Treaty and other

international accords and norms, it is developing counterspace and cyber capabilities, and it is continuing to invest in the modernization of its nuclear forces. Russia has demonstrated its willingness to use military force and hybrid tactics to achieve its political goals of reestablishing a sphere of influence, undermining NATO [North Atlantic Treaty Organization], and challenging the bedrock principles of the international order: sovereignty, territorial integrity, and the inviolability of borders. As a combatant commander I must view these actions and behaviors as threatening not only to the United States but also to our allies and partners. To be clear, we have no interest in threatening Russian security. Its actions, which include probing and activities below the threshold of armed conflict, are destabilizing and pose increased threats to international security. We are responding with strong and prudent measures to defend U.S. interests:

- Russia's nuclear doctrine and rhetoric, which appear to lower the threshold for the use of nuclear weapons, show the difference between Russian and U.S. concepts of the use of force. They also bring to light concerns about Russia's commitment to strategic stability.
- Russia's nuclear force and infrastructure modernization raise the possibility of both qualitative and quantitative advancements in its force structure.
- From a conventional standpoint, Russia's investments pose a threat to regional and strategic stability.
- Verifiable treaties and policies are key to strategic stability. While to date Russia is adhering to its New START obligations, it has chosen to circumvent its Conventional Forces in Europe and Intermediate-Range Nuclear Forces [INF] Treaty commitments. Particularly in the case of INF, the manner with which it has violated its responsibilities calls into question Russia's adherence to international law and norms of behavior. We encourage Russia to return to adherence to its treaties.



- Historically, arms control treaties have significantly reduced the numbers of nuclear weapons in stockpiles. While I am hopeful that this trend can continue, it is up to Russia to return responsibly back to the negotiations. Arms control treaties contribute to strategic stability through transparency, confidence-building, and verification.
- Effective missile defense is an essential element of the U.S. commitment to strengthen strategic and regional deterrence against states of concern. The Ground-Based Midcourse Defense system protects the U.S. homeland against a limited intercontinental ballistic missile [ICBM] attack from North Korea and potential future threats from Iran. Our missile defense capability is not about Russia nor does it pose a threat to Russia's nuclear arsenal. Russia should understand this given our transparency of U.S. missile defense capabilities.
- We would all like to see Russia work to emerge as a responsible player on the international stage.

*JFQ: Given the rise of a more diverse set of threats from a number of states and potentially nonstate groups, how does the current triad of U.S. nuclear forces first fielded in the Cold War and your plans to modernize these capabilities address this different world?*

**Admiral Haney:** The range of potential actors with nuclear weapons and the means to deliver them has increased since the end of the Cold War, but we must also address the rapid evolution of destructive counterspace and cyberspace capabilities. While not every attack in space or cyberspace is of a strategic nature, we must be able to deter strategic attack in multiple domains from multiple actors. We must be able to deter strategic attack from major powers while we also address threats from nonstate actors and regional states such as North Korea.

Even as we adhere to our New START obligations and reduce the number of deployed warheads as well as

deployed and nondeployed launchers, we must ensure that we have a credible strategic nuclear deterrent that has diversity and flexibility such that no adversaries can think that they will benefit from escalating to include the employment of a nuclear weapon, that it will be costly to them, and that restraint is a better option. Other nuclear-capable nations are placing a high priority on developing, sustaining, modernizing—and in some cases expanding—their nuclear forces. A safe, secure, effective, and ready nuclear deterrent is fundamental to our national security strategy and to deterring strategic attack on the United States and assuring our allies. This is why recapitalization of our nuclear-deterrent enterprise is my top priority. Our choice is not between keeping the current forces or replacing them; rather the choice is between replacing those forces or not having them at all.

Current plans to replace Minuteman III ICBMs are just in time. Recapitalization is necessary to ensure a viable, responsive ICBM force so future adversaries cannot launch a comprehensive counterforce attack by striking only a few targets. Our ballistic missile submarines [SSBNs] represent our most survivable leg. Recapitalization of the sea-based strategic deterrent is my top modernization priority as we cannot further extend the current *Ohio*-class SSBN.

Air-delivered nuclear weapons offer unique value in that they are readily capable of providing both strategic and extended deterrence. The B-21 bomber, long-range standoff cruise missile, and B61-12 gravity bomb will provide flexibility and provide the President tailorable options should deterrence fail. These capabilities will allow us to address a range of contingencies in highly contested and A2/AD environments.

Our stockpile is safe, secure, and effective, but we must proceed with planned life-extension programs as the average age of the stockpile is the oldest it has ever been. Like the platforms, our warheads require life extension as we are using a capability that in most cases is well beyond the intended design life.

While all three legs of the triad are vital to our deterrence efforts, those

capabilities alone are not enough. Often overlooked are the critical tankers that refuel our strategic bombers; effective indications and warning of incoming threats through our strategic space and terrestrial systems; and assured and survivable national and nuclear command, control, and communications. Our strategic deterrent also includes the necessary infrastructure to sustain reliable warheads; a credible missile defense system that defends against attacks from rogue nations; a resilient space and counterspace architecture; a robust conventional force; and of course a comprehensive whole-of-government approach. All of these capabilities—along with continued investments in space and cyberspace—provide the tools the Nation needs for security in a dangerous and unpredictable world. At the end of the day, we must ensure that no nuclear-armed adversaries think they can escalate their way out of a failed conflict. They must perceive that restraint is the best course of action.

*JFQ: What is your assessment of USSTRATCOM's ability to gain and maintain situational awareness while effectively executing all your operations in space?*

**Admiral Haney:** Increasingly contested, degraded, and operationally limited, space is vital to our way of life, and given the number of objects, including debris, that are in orbit today, it is important that we are able to have and share space situational awareness [SSA]. In concert with the Joint Space Operations Center [JSpOC] at Vandenberg Air Force Base, California, the newly formed 18<sup>th</sup> Space Control Squadron performs the routine SSA mission, tracking more than 23,000 man-made objects in orbit every single day. Last year more than 1.2 million collision warnings were sent to satellite operators supporting 148 confirmed collision-avoidance maneuvers, including four by the International Space Station. Those numbers will continue to grow as more governmental, commercial, and academic entities pursue space capabilities. The JSpOC remains focused on delivering tailored space effects to joint and coalition



Ballistic missile submarine USS *Rhode Island* (SSBN 740) returns to Naval Submarine Base Kings Bay in Kings Bay, Georgia, March 20, 2013 (DOD/James Kimber)

warfighters. Under the leadership of my Component Commander for Space, Lieutenant General David Buck, USAF, last year the JSpOC supported theater operations 724 times and also resolved 245 instances of electromagnetic interference, ensuring persistent access to critical capabilities optimized to meet the demands of multidomain force projection.

We have various initiatives moving forward today to help improve our performance and understanding of SSA. These initiatives include organizational improvements, partnering, better technology, and data collaboration.

We established the Joint Space Doctrine and Tactics Forum in 2015. I co-chair this forum with Betty Sapp, director of the National Reconnaissance Office. Having Ms. Sapp's leadership emphasizes the foundational role that intelligence plays in detecting and characterizing threats to increase space collaboration and coordination between

the Department of Defense [DOD] and Intelligence Community. As an example, we've worked to better integrate our exercise programs and wargames, share lessons learned from both experiments and exercises, explore doctrine changes, and enhance information and data flow.

We also stood up the Joint Interagency Combined Space Operations Center at Schriever Air Force Base, Colorado, in 2015. Also under the leadership of Lieutenant General Buck, this center combines the efforts of USSTRATCOM, Air Force Space Command, and the Intelligence Community to create unity of effort and facilitate information-sharing across the national security space enterprise in order to develop and maintain a common operating picture across communities of interest. This center is being developed to identify and address adversarial approaches challenging our on-orbit space operations to ensure this capability is able

to continue to the support joint and/or coalition campaigns through advanced battle management command and control methodologies.

USSTRATCOM has SSA sharing agreements and arrangements with more than 50 commercial entities, 2 intergovernmental organizations (EUMETSAT [European Organisation for the Exploitation of Meteorological Satellites] and European Space Agency), and 11 nations (Australia, Canada, France, Israel, Italy, Japan, South Korea, Spain, United Arab Emirates, United Kingdom, and Germany). In fact, we currently have a number of allies and partners serving in critical crew and leadership positions in the JSpOC. Sharing SSA information and collaborating with other nations and commercial firms promote safe and responsible space operations, reduce the potential for debris-producing collisions and other harmful interference, build international confidence in U.S.



B-52H Stratofortress flies over Minot Air Force Base, North Dakota, during training exercise, November 3, 2013 (U.S. Air Force/Brittany Y. Auld)

space systems, foster U.S. space leadership, and improve our own SSA through knowledge of owner/operator satellite positional data.

We must also continue to seek innovative solutions with allies and our commercial partners to ensure that access to space operations remains available. These include active and passive protection measures for individual systems and constellations and a critical examination of the architectural path we must follow to ensure resilience and affordability in our space capabilities. Continued partnering with international and commercial entities is fundamental to effective space operations.

One tool we use to gain and maintain SSA is the Geosynchronous Space Situational Awareness Program [GSSAP]. The program achieved initial operational capability in October 2015, and USSTRATCOM is now operating two GSSAP satellites with two more currently maneuvering into position following an

August 19 launch. GSSAP provides cutting-edge SSA capabilities that facilitate space-monitoring activities, contributing to global safety of spaceflight as well as the peaceful access to space.

Other advancements in technology include the Space Fence program, which will greatly expand the capacity of the U.S. Space Surveillance Network; investments in modeling and simulation that will increase our understanding of the space environment and adversary capabilities; and funding for satellite communications that are resistant to interference.

A Space Enterprise Vision has been adopted by DOD and the Intelligence Community that recognizes that the U.S. space enterprise is not resilient enough to be successful in a conflict that extends to space. It recognizes that acquisition and programmatic decisions can no longer occur in mission area stovepipes, but must instead be driven by an overarching space mission enterprise

context. This vision is being used as we architect, develop, acquire, and operate our space systems.

To better address the challenges in space requires the integration of all source intelligence and sensing in such a way to improve indication and warning and time to execute response options if we sense our space capabilities are being threatened. The dynamic space common operational picture is being designed to allow effective command and control of space capabilities not only to attribute irresponsible behavior in space but also to allow adequate decision space for improved operational resilience.

These efforts, combined with experimentation and better training for our operators, will allow the maturity of our SSA and space control efforts to ensure space can continue to effectively contribute to joint and coalition force operations.



*JFQ: How would you characterize your command's ability to operate in cyberspace and the role of U.S. Cyber Command [USCYBERCOM] as the lead team in that fight?*

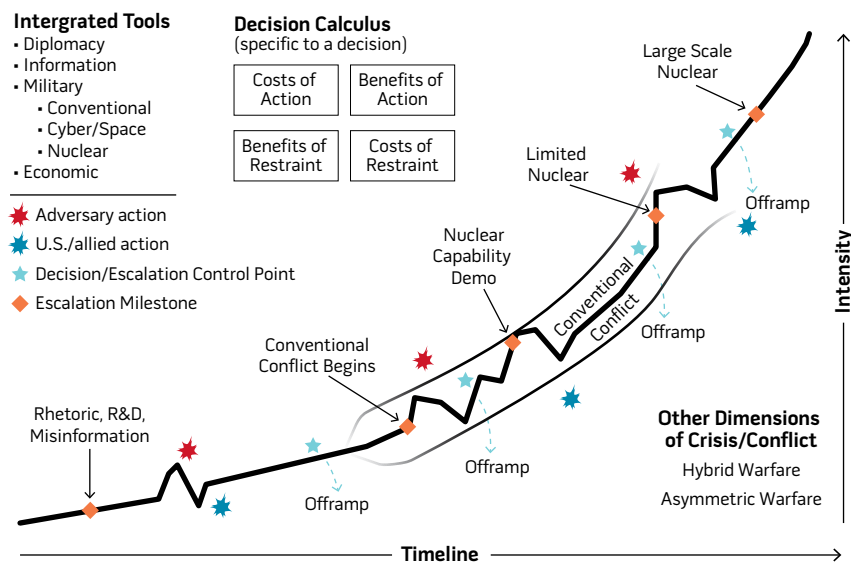
**Admiral Haney:** Cyberspace underpins all of my mission areas and has become a critical facet of national power. Our primary focus for cyberspace operations within DOD is building the capability and capacity to protect networks, systems, and information; defend against cyber attacks; and support operational and contingency planning. Admiral Mike Rogers, the commander of U.S. Cyber Command, is my operational commander to execute those cyberspace missions tasked to me in the Unified Command Plan.

Since its stand up 6 years ago, USCYBERCOM has made great strides in developing, integrating, and synchronizing cyberspace operations into our day-to-day activities and in support of the combatant commander's objectives. We are building up robust Cyber Mission Force [CMF] and Cyber Protection Teams with the authorities, skills, and resources to protect our networks against a maturing set of cyberspace threats. We're also working to ensure we can better sense threats and malicious activities, taking a layered approach to resilience and emphasizing individual cyber hygiene, all critical to the defense of our networks. In other words, the Nation and every combatant commander can now draw upon CMF teams to achieve cyberspace effects and support their myriad operations. One example is where our CMF teams are conducting cyberspace operations to support U.S. Central Command's mission to degrade, dismantle, and ultimately defeat ISIL [the Islamic State of Iraq and the Levant].

*JFQ: Which challenges has USSTRATCOM had in two areas that are critical to the joint force: intelligence, surveillance, and reconnaissance [ISR] and electronic warfare?*

**Admiral Haney:** Combatant command ISR requirements continuously outstrip Service supply, creating a situation where difficult operational tradeoffs between

**Figure. Spectrum of Conflict with Nuclear Adversary**



the commands must be made on a regular basis. This is becoming even more important as we face transregional threats that challenge our current geographic command and control constructs and management processes. We are also working to create the right balance of ISR capabilities and determining what our future ISR capabilities should look like. We've spent the past decade or more building an impressive fleet of ISR forces geared toward counterinsurgency and counterterrorism operations in a permissive environment. We are balancing maintenance of these forces while developing future capabilities to operate in an A2/AD environment.

One of the critical abilities necessary for joint force success is operating in a heavily contested electromagnetic spectrum [EMS] environment. The joint force commander requires the EMS to enable success in all warfighting domains. We are working hard to integrate modern electronic warfare with new ISR, cyber, and space capabilities to support our joint and coalition forces. Our current efforts in this area support counter-ISIL operations in theater, which stimulated a new focus on the integration of nonkinetic planning, targeting, and execution processes. Additionally, USSTRATCOM is leading implementation of the

Chairman's Joint Concept for Electromagnetic Spectrum Operations to enable operational planning and battle management of the EMS.

*JFQ: In congressional testimony and in press conferences recent you spoke about the concepts of deterrence and assurance in the 21<sup>st</sup> century. What are your views on how deterrence and assurance have changed over time and whether they are well understood in today's context by the joint force and national civilian leadership?*

**Admiral Haney:** Strategic deterrence remains a complex subject that is foundational to global security. It depends on the situation, and one size never fits all. Yet it is bounded by the understanding that no adversaries can escalate their way out of a failed conflict, that no adversaries will gain the benefits they seek, that restraint is always a better option, and that, if necessary, we will respond in a time, a place, and a domain of our choosing.

Today's world is not the bipolar world of the Cold War. Deterrence in today's multipolar world requires us to view threats across the spectrum of conflict where escalation can occur with more than one adversary and can be transregional and can span land, sea, air, space,



B-2 Spirit bomber provides vital support to U.S. Strategic Command's global strike and bomber assurance and deterrence missions (U.S. Air Force/Joel Pfister)

and cyberspace domains. Given all these complexities and the interconnectedness of globalization, these strategic problems have global consequences that require comprehensive solutions.

Deterrence remains a fundamentally human endeavor—it is about having a safe, secure, effective, and ready strategic capability and the will to use it. For U.S. Strategic Command to deliver strategic stability, we must enable a comprehensive approach to strategic deterrence, assurance, and escalation control.

To address the spectrum of conflict (see figure), we must have a comprehensive understanding of the strategic environment as perceived from an adversary's point of view. We must understand capability and intent so that we can deny enemy action, threaten the important areas the adversary values, and prevent miscalculations and actions from escalating. We must have a deep understanding of the adversary. And we can't do this alone.

Building deterrence and assurance capacity in today's challenging geopolitical landscape requires a collaborative effort; we must have a whole-of-government approach that includes our allies and partners.

Given all this, I believe joint professional military education [JPME] must include course material on strategic deterrence, assurance, and escalation control. It must challenge our thinking regarding the spectrum of conflict for an adversary

or competitor that has nuclear weapons capabilities and/or other weapons of mass destruction as well as significant counterspace or cyberspace capabilities. We must understand that the intertwined nature of these threats and our methodology to counter them is not limited to a specific domain. We must understand the difference between conventional and nuclear deterrence and what it takes to maintain strategic stability, even during periods of friction and/or conflict.

*JFQ: As a graduate of the National War College, how has your experience with JPME affected your views on the value of jointness and the need for the Services to effectively work together as a joint force?*

**Admiral Haney:** When I completed JPME, the last thing I thought was that I would become a flag officer, let alone the commander of U.S. Strategic Command. I can't tell you how important it is to develop critical thinking skills and a questioning attitude. The National War College helped me hone those skills and taught me the value of motivating my leadership team to challenge my thinking. Whenever I conduct a meeting today, whatever the subject, I look for individuals who challenge traditional thinking, regardless of rank. My JPME experience, including the various case studies covered as part of my education, further inspired

me to continue to learn while ensuring that the lessons of history are incorporated in our planning and operations to include how we have to deal with uncertainty as we digest reams of information and a variety of intelligence sources. I also learned the importance of interagency, allied, and partner contributions.

Decades of joint military operations and warfighting have become part of our culture. We must have a joint force to address the five challenge areas facing DOD today—Russia, China, North Korea, Iran, and VEOs—as well as the ability to operate across the spectrum of conflict against adversaries or potential adversaries that have weapons of mass destruction, cyberspace, or counterspace capabilities.

Our national security challenges require us to integrate all elements of national power, which is helped by the work we're doing to integrate not only our joint force, but also across the entire U.S. Government and with our allies and partners. We must improve our abilities to use information and intelligence at the speed of conflict and integrate all levers of national power into a comprehensive national campaign, rather than a collection of disjointed efforts.

I'm very proud of how far our military has come in taking the Goldwater-Nichols [Department of Defense Reorganization Act of 1986] standard and developing this kind of education, but there's still work to do. Recently, 18 members

of my command completed a satellite JPME Phase II course at the University of Nebraska at Omaha to enhance their understanding of the joint environment and to use their knowledge to tackle today's threats. This was the first satellite course offered at a nonmilitary academic institution, and partnerships like these are exactly what we need to further develop the joint force.

I tell those coming out of JPME to apply what they learned, to continue their education, and to grow with each tour. They should use their knowledge of Service, joint, and combined environments to better plan and assess operations in the future. I also stress the importance of developing critical thinking skills and an inquisitive, questioning attitude. Our military and our nation benefit from strategic thinkers who can drive innovative solutions toward the diverse problem sets we face.

*JFQ: What success have you had in developing and sustaining relationships with organizations outside of DOD to include other U.S. Government agencies, international partners, and academia to assist USSTRATCOM as it evolves?*

**Admiral Haney:** For the past 7 years, U.S. Strategic Command has hosted an annual Deterrence Symposium here in Omaha. This July, we had more than 650 participants, a diverse and talented audience of allies, partners, international experts, U.S. Government officials, think tanks, academia, national laboratories, industry, and media. The benefit of this and other deterrence forums is to challenge our thinking and build greater understanding as we enable strategic stability.

We also host a USSTRATCOM Deterrence and Assurance Academic Alliance, currently with 31 members, including Georgetown University, Johns Hopkins University Applied Physics Laboratory, Stanford University, Yale University, the University of Nebraska System, and a host of other military and civilian academic institutions. The purpose of the alliance is to build a community of interest focused on the themes

of national security and deterrence and assurance to leverage expertise and research and encourage development of deterrence professionals to meet the Nation's need for future generations of leaders to address these challenges. More importantly, this alliance provides a forum for communication and collaboration. The full list of Deterrence and Assurance Academic Alliance members can be found at <[www.stratcom.mil/daaa/members](http://www.stratcom.mil/daaa/members)>.

The command's exercise program has proved critical in our efforts to refine solutions for the whole-of-government response to challenges presented by the evolving security environment. Within the exercise framework, senior Department of State, National Security Council, OSD [Office of the Secretary of Defense], and Joint Staff participants join with combatant command staffs to debate and discuss security challenges from multiple perspectives rather than only a DOD-centric point of view. As we look at these global problems, we're pairing together so our tier-one exercises are connected to one or more other combatant commands, and we continually collaborate closely with our Intelligence Community partners.

Additionally, we have steadily grown allied participation in exercises from observer status to individual participants to dedicated teams designed to reinforce each other's capabilities. For example, Nimble Titan, the premier strategic and policy level-focused missile defense event, includes some 27 nations and international organizations. It provides participants valuable opportunities for multinational discussions, experience, and information-sharing, as well as command and control procedures that enhance synchronized missile defense capabilities.

To give you an example of our partnerships in space, we work hand-in-hand with both the commercial sector and our allies through the combined space operations participant group, which meets at a variety of forums throughout the year. I can't say enough about these forums. Moreover, our commercial partners share requisite information, so we can be more efficient and effective as we look at challenges in space.

I'm very proud of the progress we've made, including the progress of our allies and partners, in a number of our tabletop and annual exercises to gain invaluable insight from their knowledge and perspectives. For example, in the past year, one of our ballistic missile submarines—the USS *Wyoming*—ported in Faslane, Scotland, validated operational objectives while demonstrating the close U.S.–United Kingdom defense relationship and our commitment to broadening our understanding of our respective forces and challenges.

As I've said many times, the global security environment that we operate in is the most complex we have ever witnessed, and we can't tackle the challenges alone; we must continue to build and enhance our partnerships across the spectrum.

*JFQ: You grew up in Washington, DC, during the Civil Rights era and reached the top level of leadership in our military. What insights about leadership have you gained from your personal and professional experiences?*

**Admiral Haney:** My mom and dad, who had no college education, valued education and challenged me and my siblings to get one. As we grew up in humble surroundings, my mom in particular taught me to do all that I could, to value working hard, and to appreciate the importance of taking advantage of opportunities. She also instilled in us the art of patience.

As such I grew up with a perspective of being a lifelong learner. The Navy provided me an opportunity to grow and learn from each duty station and has afforded many wonderful educational and training opportunities. My Navy nuclear propulsion and submarine background taught me to have a questioning attitude and the importance of understanding the details behind procedures and methods. Growing up in DC, I saw the Civil Rights Movement firsthand, and I believe this experience has helped me to value the contributions from the entire team and to understand the importance of diversity in team building.





Unarmed Minuteman III intercontinental ballistic missile launches during operational test on February 20, 2016, Vandenberg Air Force Base (U.S. Air Force/Michael Peterson)

After graduating from Eastern High School in DC, I was privileged to attend the U.S. Naval Academy. This environment gave me the opportunity to apply to the nuclear submarine field. My education at both the Naval Postgraduate School and the National War College provided me not only a well-rounded education but also a chance to attend advanced education with international students as well as individuals from the interagency community.

The combination of Service and joint education, training, and operations allowed me to have a broad perspective. I also benefited as much, or more, from the people I have had the pleasure to serve with, work with, and for—mentors, seniors, peers, and subordinates.


I have also been fortunate to visit many places from other countries and operational units to our national laboratories to places such as Gallup from the

commercial sector. A few years ago, I was privileged to tour Nagasaki's Peace Park, a vivid reminder of the events of August 1945. I also visited numerous locations of the various island campaigns of World War II, such as Tinian's North Field, Midway Atoll, Corregidor, and the Marshall Islands. From a visit to the demilitarized zone separating North and South Korea, the Panama Canal, to various countries in Europe, the Middle East, and the continent of Africa, each opportunity to visit and get a live view of the complexity of so many different nation-states has helped shape my perspective of the challenges facing different parts of the globe.

Just the opportunity to work first-hand with key allies and partners in so many jobs has given me a vast perspective of issues as seen by other nations as well as the understanding of how coalitions are extremely valuable in addressing the complex regional and global challenges of today.

Working at U.S. Strategic Command twice, getting to lead a joint task force in the Pacific, and working for the OSD Comptroller broadened my understanding of joint operations. This built on the JPME I experienced.

Each opportunity has presented me with an opportunity to learn and grow. I would encourage all of our joint force members to make the most out of the opportunities and adventures their military careers provide. I couldn't be prouder of our joint force and the contributions they make to our collective security. They are the most prepared and professional force in the world. JFQ



Flight nurse Airman with 433<sup>rd</sup> Aeromedical Evacuation Squadron works as safety spotter at Fort McCoy, Wisconsin, July 27, 2013, during Exercise Global Medic 2013 (U.S. Air Force/Efren Lopez)

# Global Mental Health

## Optimizing Uniformed Services Roles

By Brian W. Flynn, Joshua C. Morganstein, Robert J. Ursano, Darrel A. Regier, James C. West, Gary H. Wynn, David M. Benedek, and Carol S. Fullerton

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Mental health considerations in the context of global health include an extensive variety of elements and constitute complex and wide-ranging topics. Three perspectives are important to consider. First, in the field of global mental health, direct patient care is not the only role that should be considered important. Second, this article is inclusive of not only military Services, but uniformed services as well. A true uniformed services approach, one that includes

the Commissioned Corps of the U.S. Public Health Service (USPHS), is essential to tackle global health challenges. Third, global health activities in the mental health field have been taking place for decades. Therefore, examples that represent important historic landmarks as well as current activities are included. These examples demonstrate important lessons as well as the diversity of mental health contributions to global health.

## Mental Health Around the World

“There is no health without mental health.” In making this bold statement as the foundation for its groundbreaking *Mental Health Action Plan 2013–2020*, the World Health Organization (WHO) reminds us that mental health is a fundamental global health issue.<sup>1</sup> Consider the following excerpts from that report:

- “Depending on local context, certain individuals and groups in society may be placed at higher risk of experiencing mental health problems.” The report mentions such factors as poverty, chronic health conditions, child and elderly maltreatment and neglect, and human rights violations.
- “Mental disorders often affect, and are affected by, other diseases such as cancer, cardiovascular disease, and HIV infection/AIDS. Taken together, mental, neurological, and substance abuse disorders exact a high toll, accounting for 13 percent of the total global burden of disease in the year 2004.”

How have we come to such dramatic and global conclusions? In 1996, the WHO and World Bank published the landmark study *The Global Burden of Disease* (GBD).<sup>2</sup> It quantified for the first time the mortality and disability from diseases, injuries, and risk factors in 1990 with projections to 2020. Among the most striking findings were that mental and addictive disorders occupied *five of the leading causes of disability in the world*, including unipolar major depression, alcohol use, bipolar disorder, schizophrenia,

and obsessive-compulsive disorder—with unipolar major depression constituting the leading cause of disability worldwide.

The levels of disability associated with mental disorders in the United States have shown that one-third of all the disability days “out-of-role” associated with chronic-recurrent health problems are due to mental disorders.<sup>3</sup> The societal costs of anxiety disorders alone in the United States throughout the 1990s exceeded \$42 billion.<sup>4</sup>

After the GBD report, the WHO recognized the importance of mental disorders for public health and economic development by devoting an entire annual report to mental health, *The World Health Report 2001—Mental Health: New Understanding, New Hope*.<sup>5</sup> The conclusions of this historic report were that there can be no health without mental health, and recommendations were provided for initiating more treatment in primary care and community settings, involving families and consumers, and linking with other sectors including education, labor, welfare, and the criminal-justice system. With support from the National Institutes of Health (NIH) and many international organizations, the WHO has followed up with a program of international surveys of mental disorders in over 30 countries to document in greater detail the types of disorders and levels of severity and disability associated with these conditions. In 2014, the WHO updated its findings and recommendations, adding to and emphasizing the multitude of evidence for increased attention to mental health issues worldwide.

In his foreword to the GBD report, William Foege, former director of the Centers for Disease Control and Prevention (CDC), noted:

*If knowledge is power, the field of public health has remained incredibly weak. Compared with the extensive information to a clinician for a specific patient, collective knowledge about the health conditions of a group, city, country, region or continent is often fragmentary. Our surveillance systems, with few exceptions, have been incomplete, inaccurate and heavily*

*biased towards mortality because of the relative ease of acquiring figures on death compared to those on morbidity.*

For mental disorders, this was clearly the case before the development of the third edition of the American Psychiatric Association (APA) *Diagnostic and Statistical Manual of Mental Disorders* (DSM-III) in 1980. With the availability of specific diagnostic criteria that could be incorporated into diagnostic instruments for use in community and clinical populations, it was possible to launch a new generation of psychiatric epidemiology studies that began with the Epidemiologic Catchment Area (ECA) study.<sup>6</sup> This study and its international replicates provided essential data for the GBD report prevalence and disability estimates and subsequent WHO and GBD surveys.

Commissioned officers in the USPHS at the National Institute of Mental Health (NIMH) initiated and led the ECA study, and collaborated with the WHO in developing the “Mental Disorders” chapter in the 10<sup>th</sup> edition of the *International Classification of Diseases* (ICD-10).<sup>7</sup> This chapter included the diagnosis of Post-Traumatic Stress Disorder (PTSD) for the first time in the ICD—a diagnosis now recognized worldwide in both civilian and military populations associated with trauma, disasters, and military conflict. Mental health experts for the Department of Defense (DOD) and USPHS Commissioned Corps have been closely involved with versions of the DSM including the most recent DSM-5. These efforts have moved us toward establishing common nosology on a global level.

## Mental Health's Place in Global Health

Mental health issues pervade lives, communities, and nations, and there is a worldwide trend toward a globally accepted way of identifying disorders and understanding their epidemiology. We continue to make progress toward common understandings of mental health and mental disorders, providing potential opportunities for mental health as a core component of global health efforts.



It is gratifying to see mental health increasingly recognized as a critical part of global health. International collaboration is an absolute necessity if there is to be improvement in understanding, diagnosing, and treating mental disorders. The need and opportunities for collective and collaborative international action in research, training and human resources, policy development, and services are without question. At the same time, challenges regarding availability and distribution of provider resources, stigma, access and barriers to care, and system and governmental stability are daunting.

There are contributions, however, that mental and behavioral health professionals can make beyond direct diagnosis and treatment of illness. Global mental health concerns must also be addressed at the community level. In addition, there are mental health elements intertwined among numerous other worldwide challenges and many opportunities (even obligations) for mental health experts to contribute to multinational efforts and deliberations. Consider two such cases on the topics of violence prevention (example 1) and disaster risk reduction, response, and recovery (example 2).

Behavioral health experts both within and without the uniformed services can contribute to global health efforts in ways beyond individual diagnosis and treatment, for example, research, needs assessment, training and education, risk and crisis communication, systems design and support, program and systems evaluation, and stigma assessment and reduction. Additionally, consultation to leadership is often underappreciated both as a skill and a role. Leaders can benefit from consultation by mental health experts in areas such as risk and crisis communication as well as grief leadership. Example 3 illustrates how high-level government-to-government leadership consultation in global health capitalizes on larger government initiatives and involves nations with already well-developed mental health systems.

## Roles for the Uniformed Services

The uniformed services have historically conducted a wide range of noncombat

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### Example 1. Global Violence

In 1996 the WHO declared violence a major and growing public health problem across the globe and in 2002 published its *World Report on Violence and Health*. Estimating approximately 475,000 deaths due to homicide, the WHO issued its *Global Status Report on Violence Prevention 2014*. In the face of an estimated 840,000 suicides worldwide, the WHO published in 2014 *Suicide Prevention: A Global Imperative*. Self- and other-directed violence are worldwide problems and all types of violence have mental health implications for prevention, cause, intervention, and recovery.

The WHO lists many mental and behavioral health consequences of violence, for example, alcohol and drug abuse, depression, anxiety, PTSD, eating and sleep disorders, attention deficits, hyperactivity, suicidal thoughts and behaviors, and unsafe sex. Indirect psychosocial consequences include loss of hope and empowerment, diminished self-efficacy, and erosion of trust and social connectedness. Types of violence are diverse yet all have significant mental health impacts. These include armed violence, gangs, child molestation, intimate partner violence, child abuse, sexual violence, and elder abuse. The demographics of violence affect regions, countries, and communities differentially. Due to gaps in our knowledge, intervention planning is not often based on empirical research; additionally, there are divergent cultural views on violence. Nevertheless, there is an increased appreciation that violence is a public health problem and growing evidence that violence can be prevented. Medical, public health, and mental and behavioral health experts are developing promising approaches and models to reduce violence.

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### Example 2. Disaster Risk Reduction

Disaster risk reduction, response, and recovery have increasingly become global health topics. This is partly a result of the increasing understanding of the dynamics of psychosocial impacts for disasters. These impacts reach from the individual, to the family, to the community, and to the nation and culture. The WHO's global leadership both in mental health and in psychosocial support in disasters reconciles well with its *Mental Health Action Plan 2013–2020*.

The truly worldwide nature of this issue is demonstrated by activities geared toward the development of the Hyogo Framework for Action 2 (HFA2). The United Nations supported the initial HFA in 2005. Surprisingly, it did not address certain health considerations such as key elements in disaster risk reduction (DRR). This has changed significantly in the worldwide process leading toward the development of HFA2, which is intended to build on global efforts in the decade since the initiation of the HFA and help guide DRR efforts for the next decade. In processes around the world, health has been a significant topic for consideration and mental health has been fully represented in those considerations. For example, as part of the HFA2 health planning effort, a special working group of international experts (including current and former U.S. uniformed services members) was convened to address psychosocial/mental health concerns and build community resilience within the context of DRR. Emerging themes included the importance of attending to physical as well as mental health factors across all phases of DRR: prevention, preparedness, response, and recovery.

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### Example 3. Collaboration with Russia under the Gore-Chernomyrdin Commission

An international example of Global Mental Health contributions of commissioned officers in the Department of Health and Human Services (DHHS) and the Department of Defense (DOD) occurred from 1994–2000 under the U.S.-Russian Joint Commission on Economic and Technological Cooperation (the Gore-Chernomyrdin Commission). A disaster-related mental health collaboration involved the exchange of information on disaster response programs and training rescuers. Russian representatives visited disaster sites in the United States, led by USPHS commissioned officers in the Substance Abuse and Mental Health Administration (SAMHSA), with additional consultations on disaster responses by the NIMH and the USUHS Department of Psychiatry (involving both Active-duty and retired military members). SAMHSA commissioned officers visited an airplane crash site in Irkutsk and the healthcare programs for victims of the accident at Chernobyl. The Russians visited the site of the Oklahoma City bombing and a tornado recovery program in Arkansas. Additional extensive programs were initiated under this health committee to advance the treatment of depressive disorders in primary care settings and to address alcoholism prevention and encourage the treatment of substance abuse in primary care settings.

The interest in health and mental health programs at the highest levels of government is directly related to their relevance for humanitarian, economic, and national security implications. The need for shared international collaboration, rapid mobilization of expert medical resources, and logistical support to address these issues has consistently required the services of commissioned officers in both the USPHS and DOD.



Former Montana National Guard Soldier who struggles with PTSD receives pointers from U.S. Navy Reserve officer and volunteer ski instructor during Eagle Mount Bozeman Lasting Experiences for Military therapeutic ski program at Big Sky, Montana, January 31, 2014 (DOD/Michael J. MacLeod)

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#### Example 4. Mental Health Elements in East Africa U.S. Embassy Bombings

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On August 7, 1998, the U.S. Embassies in Nairobi and Dar es Salaam were bombed. In Nairobi, a significant number of Kenyans were killed and injured and 12 Americans lost their lives. In the days that followed, the Kenyan Medical Association, through the U.S. Agency for International Development (USAID), requested a senior USPHS officer with extensive experience in disaster behavioral health to come to Nairobi to advise and assist in organizing programs for Kenyans who were experiencing psychological trauma. Several trips to Nairobi followed, resulting in the funding of a behavioral health intervention program funded by USAID.

When the Embassy was rendered unusable, Department of State activities and staff were temporarily moved to USAID offices, resulting in the crowding of two organizations with different levels of exposure to the trauma and different organizational cultures. The USPHS Commissioned Corps officer located in that building was also confronted with many of these psychosocial consequences. The mission quickly expanded to include consultation to State Department and USAID leadership. This consultation involved needs assessment, recommending appropriate interventions, and advising on organizational policies and practices (for example, staff reassignments, availability of treatment resources, and the extent of documentation of diagnostic and treatment information). The officer worked closely with Embassy medical leadership who were simultaneously victims and responders, State Department leadership in Washington, senior USAID officials in Kenya, as well as the Ambassador and her senior staff.

In the months following the bombings, there was a U.S.-led assessment of how the emergency medical systems of Kenya and Tanzania could be improved. In addition, a significant research agenda was undertaken to better understand the psychosocial impact of such events. The early and continuing involvement of behavioral health expertise later contributed to capacity-building efforts not only in Kenya and Tanzania but in U.S. Government entities as well. The intervention required content expertise in disaster behavioral health and rapid response to changing and emerging needs, acquisition of ethnic/racial and organizational cultural factors, political factors, and complex organizational factors.

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operations. The increasing globalization of the U.S. economy, expansion of international partnerships, advancements in technological communication, and an increase in the frequency of natural disasters have resulted in a greater emphasis on global health operations. Increasingly, the focus is on efforts to optimize the delivery of global health support by the U.S. uniformed mental health providers who play a key role in the preparation, execution, and recovery from global health operations. Example 4 illustrates uniformed services contributions in disaster relief and health care after the bombing of U.S. Embassies in East Africa.

#### Training and Preparation

Prior to conducting global health operations, uniformed personnel receive an array of trainings including education and simulated experiences. Preparation increases their ability to effectively





Chaplain assistant, 175<sup>th</sup> Wing, Maryland Air National Guard, rappels down mountainside during Adaptive Sports Camp in Crested Butte, Colorado, designed to provide encouragement to military veterans with post-traumatic stress disorder, amputations, and other injuries (U.S. Air Force/Vernon Young, Jr.)

conduct operations using enhanced situational awareness unique to the environment and anticipated exposures. Personnel are trained in cultural awareness to aid in the provision of effective health care that respects the unique needs of the indigenous population. Joint training operations with host-nation personnel facilitate information exchange and collaboration throughout the mission. An important aspect of preparation is learning how to work with socioeconomically disadvantaged populations including the impact of health disparities on how foreign intervention may be received. Military personnel receive guidance on anticipating psychological stressors unique to diverse overseas operational environments such as exposure to human suffering, handling bodily remains in the aftermath of a disaster, and managing concerns about potential chemical, biological, radiological, and nuclear exposures. Ongoing

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#### **Example 5. Consultation to Eurasian Allies in Disaster Preparedness and Response**

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In 1993, the George C. Marshall European Center for Security Studies was established to create a more stable security environment by advancing democratic institutions and relationships, promoting active, peaceful security cooperation, and enhancing enduring partnerships among the nations of North America, Europe, and Eurasia. In addition to graduate-level resident programs and conferences, the Marshall Center identifies Defense Department and civilian experts in technical and professional fields to meet specific assistance or training requests of partner nations and coordinates visits with content experts. As preparedness for and response to disasters often fall to the national defense forces of U.S. allies, assistance in developing public health response to psychological aspects of disaster (including war and terrorism) has been both sought out and encouraged by Marshall Center leadership. Comprehensive disaster response planning and implementation enhances health security in our allies and is thus in our mutual best interest.

In response to such a request for assistance, a military psychiatrist from the USUHS traveled to the Kazakhstan National Defense University in 2013 to train members of the National Military Medical Institute in curriculum development for assessment and management of post-traumatic stress. Over 2 days of presentations, interactive seminars, and discussions (assisted by translators hired and vetted through the Marshall Center), military medical educators from the Kazakhstan Defense Forces were introduced to specific elements of disaster-response curriculum developed at USUHS including principles of psychological first aid, psychological triage during disaster, and the assessment and management of PTSD. The focus of the consultation was integrating disaster psychiatry concepts into existing medical education programs supporting traditional didactics with cooperative learning group exercises and simulation. Discussions involved translation of Kazakhstani culture-specific elements into U.S. case material, and expansion of military response concepts to potential civilian disasters. The dialogue initiated during the visit was extended via further correspondence, resulting in requests for future collaboration.



**Table. Roles of Uniformed Mental Health Providers in Global Health Operations**

Preparation	Execution	Recovery
Identify and prepare for operational exposures, psychological stressors	Monitor individuals and systems and provide interventions such as Psychological First Aid	Provide reintegration education, screening, and referral
Training/educated regarding cultural awareness	Monitor methods intended to assure cultural appropriateness. Make rapid adjustments	Evaluate cultural appropriateness of approaches/interventions
Assess pre-event/early event healthcare status, capacity, disparities	Advise on reestablishing healthcare capacity	Normalizing reactions, monitor healthcare system recovery
Train in consultation to leadership. Develop relationships and educate leaders	Provide consultation to and provide support for leaders	Assist in after action review and analysis. Assist in sustaining positive changes
Assist in preparedness and plan development	Assist/monitor plan implementation	Evaluate/assist in plan modification
Train providers/responders	Monitor performance	Redesign based on experience
Conduct and disseminate research	Apply research	Repeat/conduct further research

**Example 6. Responding to an Ebola Outbreak**

The outbreak of Ebola in West Africa provides a dramatic example of both how complex and far reaching disease outbreaks can be and how comprehensive an effective response must be. In this case, understanding and addressing both public health and medical needs are essential. The psychosocial consequences are massive. The response has been an integrated uniformed services response that fully incorporated mental health issues. The recent U.S. response to the Ebola epidemic is a prime example of the need for such expertise and logistical support. Regardless of the nature of the medical or disaster emergency, the need to address the mental health consequences in affected populations requires the same level of attention and expertise.

The Department of Defense (DOD) has deployed significant resources to establish medical treatment resources and improvement of disease diagnostics. The USPHS has deployed officers (including mental health personnel) to staff a DOD hospital in Liberia to care for healthcare workers exposed to Ebola.

As part of the Uniformed Services University response, the Department of Psychiatry and the Center for the Study of Traumatic Stress (CSTS) have provided (through an integrated effort involving USPHS and military officers) consultation on Ebola risk communication to leadership at the CDC to assist in their domestic and international messaging efforts. CSTS has also developed educational fact sheets on Ebola for patients and healthcare providers. These have been disseminated to a wide range of stakeholders including Federal agencies, national and state mental health leaders and policymakers, healthcare advocacy groups, and U.S. medical schools.

challenges include training enough of the right people—early in their careers—who possess skill sets matched both to the mission and to the culture.

Mental health support to the execution of a global health operation involves the provision of direct patient care including screening for and treatment of a range of behavioral health symptoms and disorders. Uniformed healthcare personnel understand fundamental evidence-based mental health interventions for use in the initial response to traumatic events such as psychological first aid, which emphasizes

safety, calming, connectedness, self and community empowerment, and hope. A unique role for military mental health services is providing support to high-risk personnel often overlooked during high-tempo operations, for example, first responders and leaders. Uniformed mental health personnel can collaborate with local healthcare leaders on policy and planning to support the development or reestablishment of disrupted healthcare capacity. Example 5 presents a military-to-military global health initiative facilitated by an international organization.

Uniformed services mental health resources can play roles for U.S. uniformed personnel as well as global partners. The recovery phase of global health operations is enhanced by mental health interventions that reintegrate caregivers into daily life. This includes education about expected reactions to stressful events, common mental health symptoms, education about and linking with available resources, mental health screening of personnel, and treatment referrals when indicated. Success of global health operations can be enhanced during the recovery phase when mental health advisors work with local leaders to provide consultation on mechanisms to sustain beneficial healthcare changes. Mental health personnel can assist the host nation to articulate long-term public health goals, clarify gaps in mental healthcare needs, and identify potential barriers to implementation. The accompanying table demonstrates how uniformed mental health workers can assist throughout different phases of various operations.

**Contributions**

Uniformed mental health providers offer a unique set of capabilities to organizations involved in global health operations. Every uniformed provider develops skill in direct support of operating forces. Success stems from shared experiences, knowledge of organizational culture, and recognition that interventions affect individuals as well as groups (see example 6).

Direct patient care in the uniformed services is fundamentally identical to that provided by any qualified mental health provider, but the interaction is different in several ways. Uniformed providers succeed by applying an understanding of organization and operational context in which Servicemembers function. This understanding allows treatment to be tailored to the needs of the individual and organization without creating or exacerbating conflicts. Periodic reassignment and augmentation require mental health providers to rapidly assimilate into new organizations on a regular basis. This ability translates readily into supporting Servicemembers as they enter global



Airman assigned to 379<sup>th</sup> Expeditionary Aeromedical Evacuation Squadron logs patient's information into Electronic Health Record system in Southwest Asia to support Operation *Inherent Resolve*, January 6, 2016 (U.S. Air Force/Nathan Lipscomb)

health engagement, where leaders and caregivers must rapidly and effectively understand and assimilate new cultures to provide effective care often while operating in difficult environments.

Military mental health providers develop and apply knowledge of human response to acute and chronic stress as part of their routine clinical work. Whether stress of adaptation to the military, garrison training demands, or combat exposure, military mental health professionals routinely care for individuals exposed to significant psychological stress. Mental health providers routinely advise line leaders on best practices for preventing and mitigating combat and operational stress. They also provide incident response capability within military units following traumatic events. In working with developing nations, an understanding of human stress response

is fundamental as rates of psychological trauma can be significant while treatment and follow-up resources are often few or even nonexistent.

Mental health in the military Services is inherently task-oriented. Every clinical encounter concludes with a fitness for duty determination, a constant reminder to providers of the role they play in maintaining readiness. Providers are capable of deploying a range of scalable and diverse capacities to meet the needs of operations. Military mental health providers routinely support humanitarian assistance missions with the primary mission of care for military personnel. This role can easily expand to include direct care or advising local health officials or other uniformed medical personnel on population psychological health. Mental health systems in low- and middle-income countries are minimally funded and staffed, with an

average of 0.05 psychiatrists per 100,000 people in low-income countries.<sup>8</sup> In some countries, there may be only one psychiatrist in the entire nation. In such instances, the role of the uniformed provider is to support and develop the capacity for mental health intervention in primary care.

### Challenges and Opportunities

The integration of mental health issues into global health engagement presents a number of exciting opportunities as well as challenges. Opportunities include:

- Identifying and appropriately treating mental disorders is a worldwide challenge (for example, see *The Global Burden of Disease* report and the WHO's *Mental Health Action Plan 2013–2020*). Preparing for and

### Example 7. Providing Timely, Practical, and Customizable Mental Health Guidance

CSTS conducts research and consults with communities and Federal and international agencies on matters surrounding individual and community responses to trauma, disaster, and war. The center also provides educational resources in the form of customized, highly readable just-in-time fact sheets that offer individuals and organizations relevant information to support the behavioral health response to disasters. In 2013, Typhoon Haiyan devastated Southeast Asia, causing over \$2 billion in damages, killing approximately 6,300 people, and injuring nearly 29,000 others. Prior to the deployment of DOD mental health forces in response to this disaster, CSTS provided educational fact sheets to U.S. senior military mental health leadership with information about supporting first responders, providing for the needs of children and families, aiding leaders in managing the grief of those affected, and other relevant resources. Military mental health leaders indicated these fact sheets served as an ideal resource as they prepared for and responded to the needs of all stakeholders affected by Typhoon Haiyan as well as those involved in response efforts.

An early CSTS consultation led by Dr. Harry Holloway in collaboration with the National Aeronautics and Space Administration (NASA) involved survivors of the 1988 Spitak earthquake in Armenia. Estimated casualties were over 50,000 and approximately 500,000 people were left homeless. CSTS joined with several other academic centers providing direct consultation in multiple medical areas, including mental health, as part of NASA's telemedicine program. Known as the "Space Bridge to Armenia," this innovative program advanced our understanding of the effect of trauma on mental health, while facing medical and technical challenges of the time such as identifying personnel in both countries with appropriate technical and medical skills, establishing multi-site video connections, and finding the best forms of media to securely transmit complex patient information. Efforts such as this provide opportunities to explore the cross-cultural dimensions of understanding mental health and application of intervention techniques. At the same time, it allows U.S. resources to provide support and build capacity in other areas of the world.

responding to global events provide a unique opportunity to share knowledge among nations, enhance the mental health capacity of underdeveloped nations, and help combat worldwide stigma concerning mental illness. (Example 7 illustrates how pre-event and just-in-time guidance and educational materials are available for preparedness and response.)

- Providing opportunities to expand the range of uniformed services roles and interventions beyond combat will benefit the uniformed services in contexts that extend beyond global health. Increased awareness of the impact of global health capabilities of the uniformed services can enhance U.S. foreign policy and diplomatic objectives.

Ongoing challenges include:

- Stigma regarding mental health both domestically and around the world remains strong.
- There is a lack of trained personnel and healthcare and public health systems in many areas of the world.
- There is a need to expand understanding of the full scope of what

uniformed Services and other mental health experts can achieve.

- Training needs are broad and reach beyond direct patient care, especially regarding cultural competence, crisis communication, and consultation.
- There is a need for expanded support for the value of multi-professional and multi-organizational integration and collaboration.
- There is a need for expanded methods of collecting, organizing, retrieving, and adapting what is known. JFQ

### Notes

<sup>1</sup> World Health Organization (WHO), *Mental Health Action Plan 2013–2020* (Geneva: WHO, 2013), available at <[http://apps.who.int/iris/bitstream/10665/89966/1/9789241506021\\_eng.pdf](http://apps.who.int/iris/bitstream/10665/89966/1/9789241506021_eng.pdf)>.

<sup>2</sup> Christopher J.L. Murray and Alan D. Lopez, eds., *The Global Burden of Disease: A Comprehensive Assessment of Mortality and Disability from Diseases, Injuries, and Risk Factors in 1990 and Projected to 2020* (Boston: Harvard School of Public Health, WHO, World Bank, Harvard University Press, 1996).

<sup>3</sup> Kathleen R. Merikangas et al., "The Impact of Comorbidity of Mental and Physical

Conditions on Role Disability in the U.S. Adult Household Population," *Archives of General Psychiatry* 64, no. 10 (October 2007), 1180–1188.

<sup>4</sup> Paul E. Greenberg et al., "The Economic Burden of Anxiety Disorders in the 1990s," *Journal of Clinical Psychiatry* 60, no. 7 (July 1999), 427–435.

<sup>5</sup> WHO, *The World Health Report 2001—Mental Health: New Understanding, New Hope* (Geneva: WHO, 2001), available at <[http://apps.who.int/iris/bitstream/10665/42390/1/WHR\\_2001.pdf](http://apps.who.int/iris/bitstream/10665/42390/1/WHR_2001.pdf)>.

<sup>6</sup> Darrel A. Regier et al., "The NIMH Epidemiologic Catchment Area Program: Historical Context, Major Objectives, and Study Population Characteristics," *Archives of General Psychiatry* 41, no. 10 (October 1984), 934–941.

<sup>7</sup> WHO, *ICD-10: International Statistical Classification of Diseases and Related Health Problems*, 10<sup>th</sup> Rev., Vol. 1 (Geneva: WHO, 1992).

<sup>8</sup> WHO, *Mental Health Atlas 2011* (Geneva: WHO, 2011), available at <[www.who.int/mental\\_health/publications/mental\\_health\\_atlas\\_2011/en/index.html](http://www.who.int/mental_health/publications/mental_health_atlas_2011/en/index.html)>.





U.S. Navy Hospital Corpsman talks with students from Andalas Primary School during subject matter expert exchange held at Andalas Social Health Clinic, during Pacific Partnership 2016, August 26, 2016 (Royal Australian Air Force/David Cotton)

# Applying Smart Power via Global Health Engagement

By Sebastian Kevany and Michael Baker

The U.S. military is entering a period of dramatic redirection and restructuring at a time of broader international upheaval, from Ukraine to Syria.<sup>1</sup> The past decade of global conflict has emphasized the predominant hard power focus of the Armed Forces, often with limited success. The emergence of a new mission—smart power—offers

opportunities to shift toward innovative forms of international intervention and conflict resolution by the U.S. military through coordination with national security strategies such as global health diplomacy (GHD).<sup>2</sup> Recently articulated doubts over the wisdom of supplying health, development, and other forms of economic support to those countries that support Islamic

fundamentalism highlight an increasing need for the United States and other world powers to harmonize and align development, altruistic, and security initiatives.<sup>3</sup>

Military forces could be deployed and used to contribute to foreign policy, global health, and the strengthening of key local actors in related sectors.<sup>4</sup> Doing so could maintain strategic regional and international goals and advance international stability and development through strategies such as *global health engagement* (GHE). GHE is defined as “health

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activities which the DOD [Department of Defense] conducts in support of the national security policy and military strategy of the United States.”<sup>5</sup> While a range of tensions exists around expanded military engagement in humanitarianism, we can attempt to guide this process toward a mutually acceptable engagement on both altruistic and strategic levels via the GHD paradigm.

Considerable damage to the international prestige of the armed forces of the United States and United Kingdom has resulted from the Iraq and Afghanistan wars and associated events.<sup>6</sup> Combined with questions of strategic gains, cost-effectiveness (consideration of the “opportunity costs” of the combat and postcombat periods, including care of returning veterans), long-term regional stability, and lack of global social, political, and cultural acceptability, there is increasing speculation regarding the use of combined military, health, and development initiatives as some of the possible effective substitutes for, or complements to, hard power interventions. For example, strengthening host-nation healthcare systems is one path to achieving strategic goals, through accessing and stabilizing regimes opposed to extremism.<sup>7</sup>

Opponents of smart power strategies point to the fact that there is no proven correlation between international development programs and the capacity of donors to positively influence geopolitical events, yet medical initiatives are increasingly recognized as an effective and efficient method of supporting the global community’s dual-health and non-health priorities in tandem.<sup>8</sup> These include threat reduction from epidemics, enhanced security (including health security), and political and diplomatic alliances—pursued in concert with each other, rather than in isolation, via DOD initiatives such as medical stability operations and partner engagement and force health protection and readiness.<sup>9</sup> Thus GHE is specifically designed to support both national security and international engagement.<sup>10</sup>

The modern international security environment has undergone significant changes since the end of the Cold War.

One significant driver of this change is the failed state, an environment that provides little hope for a better future among young populations and is “susceptible to exploitation by terrorists, tyrants, and international criminals.”<sup>11</sup> Concurrently, the nature of the physical battlefield has changed via an increasing number of tribal and ethnic clashes that involve non-state, guerrilla, or other irregular players rather than uniformed forces.<sup>12</sup> This evolution of the conflict environment has had a corresponding impact on approaches used by security instruments to implement and influence foreign policy objectives.

The U.S. Marine Corps first identified related models in the latter half of the 1990s, describing its vision of future warfare in this context as the “Three Block War” under which hypothesis individual soldiers are required to simultaneously conduct military, peacekeeping, and aid operations in combination with, and in close geographical proximity to, each other.<sup>13</sup> The essence of this innovative concept is that modern militaries, to be effective, must be trained to operate in all three operating environments simultaneously—and that to do so, leadership training in related noncombat skills, including health care and diplomacy, must be conducted at all levels of command.

Military technology has advanced significantly in recent years, including remote imaging that can be leveraged to gain immediate information regarding needs on the ground through overflight by satellites and unmanned aerial vehicles (UAVs). This ascendancy of technological warfare has led to a reevaluation of the role of traditional or conventional armed forces as ground troops.<sup>14</sup> Apart from growing public intolerance of military and civilian “body counts” associated with the pre-UAV era, the increased range of options offered by related technological advances has meant that the threat neutralization roles formerly the responsibility of the foot soldier are increasingly delegated to unmanned interventions.<sup>15</sup> As described in the Three Block War paradigm, the role of individual soldiers is evolving beyond mere combatants. To adapt to these new and

diverse roles, as well as proving purposeful activity for the residual manpower surplus associated with technological warfare, the Armed Forces require increased training in, and awareness of, their role as international representatives, global health workers, and diplomats, as well as their traditional battlefield roles.

Soldiers will continue to function according to the rules of engagement and take orders and procedures from their officers, while demonstrating an *explicit* awareness and recognition of their *implicit* role as benign liberators and agents of international relations and development that stands to significantly enhance their prestige, value, functionality, and self-esteem. Such aspirations mirror the North Atlantic Treaty Organization’s longstanding Peace Support Operations doctrine, which includes the provision of humanitarian assistance to civilian populations as one of its six guiding principles.<sup>16</sup>

Since the end of the Cold War, international economic crises and domestic budgetary pressures have generated tremendous pressure on Western military establishments to adapt and streamline operations via a diversification of roles and responsibilities. Military and political leaders’ recognition of international health emergencies and climate change as threats to national security is notable.<sup>17</sup> The *Policy Guidance for DOD Global Health Engagement*, released in May 2013, made important first steps in related diversification processes.<sup>18</sup> All of these vectors have come to be important elements in the strategies and tactics used by the military in current and recent conflicts—as well as in the context of the debate about the appropriate role, structure, and composition of the U.S. military. These broader global developments have contributed in a critical way to a rapidly evolving conflict environment in which traditional interventions have struggled to achieve success.

### **GHD as a Strategic Military Tool**

The discussion thus far suggests that the increased use of tools such as GHE by the Armed Forces should be examined more closely in the diplomatic context as well as in its primary health security





People's Liberation Army Navy hospital ship *Peace Ark* Senior Captain Sun Tao shares medical experiences during group activity during Fundamentals of Global Health Engagement Course at Makalapa Clinic as part of Rim of the Pacific 2016, Joint Base Pearl Harbor–Hickam, July 11, 2016 (U.S. Navy/ Katarzyna Kobiljak)

role (for example, the 2014 response to West Africa's Ebola outbreak) of protecting vital national health security interests.<sup>19</sup> This is particularly relevant in the context of DOD guidance that promulgates the use of global health programs to achieve strategic endstates or to support other national and international objectives. *Global health*, in this context, is defined as the alleviation of those health challenges that affect the world's poorest and most marginalized populations, with an emphasis on communicable diseases such as HIV/AIDS, tuberculosis, and malaria, as well as specific reference to health concerns that require global cooperation due to transcendence of territorial boundaries.<sup>20</sup> GHD in this context is therefore best described as a foreign policy tool that blurs the line between altruism and enlightened self-interest. It leverages military and political assets in response

to both human or natural disaster emergencies and longer term nation-building and stabilization through infectious diseases control and support in order to achieve specific goals for the global community.<sup>21</sup>

Western military forces hold a distinguished tradition of providing emergency health and aid assistance to civilian populations overwhelmed by natural disasters or civil strife.<sup>22</sup> The military is unique in providing immediate response using transportation assets, surveillance, monitoring and evaluation, and other intelligence tools—particularly important in both epidemiological and security contexts.<sup>23</sup> The Armed Forces also have a built-in logistics supply system that can put relief anywhere in the world in a short time. This represents a unique set of capabilities that often make the military the best “first responder” for GHE.<sup>24</sup> Opportunities for those fields of endeavor

related to GHE (for example, emergency medical care, provision of drugs or treatments, rapid mobilization of people or resources) and those generally associated with GHD (polio eradication, HIV/AIDS prevention or treatment, and anti-malarial campaigns) are increasingly evident.

Medical “hearts and minds” operations were also initially highly successful as an alternative to military force during the Vietnam War, and it remains a regret of the conflict's high-level planners that such approaches were not maintained and employed more extensively.<sup>25</sup> Modern GHE doctrine, encompassing longer term global health interventions, appears to have assimilated related lessons on the need for different configurations, supplies, and training for appropriate, sustainable, and effective responses, in both medical and strategic contexts. For example, after more than 13 years





Co-founder and CEO of Seed Global Health speaks on “Improving Developing Country Health Systems Through the Spirit of Volunteerism,” part of Secretary’s Office of Global Health Diplomacy Speaker Series, at State Department, April 22, 2014 (State Department)

of operations according to traditional military roles, U.S. involvements and interventions in Southeast Asia are now increasingly characterized as soft power missions, while DOD policy guidance for GHE stipulates parameters to “ensure legality, appropriateness, and effectiveness” as well as building the trust and confidence of partner nations and communities.<sup>26</sup> The United States is not alone in pursuing such innovative strategies; other international actors such as Venezuela and Cuba, through sustainable initiatives such as community based clinics and hospitals that provide long-term and affordable health care to recipient populations, have been “particularly adept at parlaying provision of medical services to nationals of other countries into support in international forums” as well as advancing strategic donor self-interest.<sup>27</sup>

The military has proved its nascent capacity in settings such as Iraq and Afghanistan to provide longer term GHE support operations. This is evident in programs that mitigate infectious diseases such as HIV/AIDS, tuberculosis and malaria, as well as making healthcare systems stronger.<sup>28</sup> There has been no evidence to

date of the maintenance of these activities after military withdrawal, while related GHE initiatives have both demonstrated the potential capacity of the military in this regard and produced significant yet unmeasured strategic gains that were potentially as effective in achieving strategic goals as combat and ballistic efforts.<sup>29</sup> While combined tactical and altruistic successes have occurred throughout military history, no formal framework and set of standards for their delivery, along with a set of operational principles governing such engagements that optimize smart power effectiveness, have been developed and applied.

### Issues of Primacy, Alignment, and Harmonization

In a recent editorial, *The Lancet* examines the risks and benefits of the inevitable augmentation of the military’s role in global health in the 21<sup>st</sup> century.<sup>30</sup> We must ask to what extent GHE and other altruistic endeavors could be used by the United States and others as a convenient rationale for expanding international military presence—arguments that Russia has employed to justify its occupation of eastern parts

of Ukraine.<sup>31</sup> Interagency coordination and governance of combined GHE and GHD activities as well as public and media transparency are therefore key concerns.<sup>32</sup>

Enhanced alignment between DOD and the U.S. Agency for International Development (USAID), for example, inevitably raises questions around alignment between civilian and military doctrines. Would DOD, in a joint GHD/GHE operation scenario, subordinate itself to the governing principles and authority of USAID? Or, under a GHD paradigm, would USAID become increasingly aware of strategic considerations, with specific regard to settings in which conflict is currently taking place or recipient populations that pose a proven threat to donor security? DOD is at present subordinated to USAID through its Office of Foreign Disaster Assistance in every foreign disaster response that DOD is asked to support. For nondisaster engagements, such as partner-nation capacity-building, while not subordinate to USAID, DOD policy guidance directs that “GHE activities should be consistent with the relevant U.S. Embassy’s integrated country strategy

and complementary to USAID's country development cooperation strategy" to avoid redundancy—or even conflict—between individual agency efforts.<sup>33</sup> The development of coherent, consistent, and broadly applicable GHE approaches may be informed, enhanced, and made practicable by reference to relevant criteria, standards, and guidelines for smart global health.<sup>34</sup>

### Developing a Frame of Reference

If the U.S. military chooses to devote greater levels of resources and effort to GHE in order to achieve joint strategic and altruistic ends under a GHD paradigm, adherence to appropriate program and intervention design, delivery, and selection criteria will be of critical importance. As a recent RAND report notes, "A focus on the higher-order objective of enhancing legitimacy of local leaders would cause planners to carry out global health programs in a different way."<sup>35</sup> This demonstrates the importance of adapting focus to optimize multilevel gains. Equally important, interventions should not threaten the structure or integrity of local healthcare systems by significantly exceeding local standards of care.<sup>36</sup> Smart intervention categories in this regard, and as described in recent DOD guidance, also include educational and training exercises. These are endeavors to which, for example, the plans, operations, and military intelligence division of organizations such as the U.S. Navy and Naval Reserve might meaningfully contribute.

Civil affairs units of the United States and other militaries traditionally conduct civil-military operations, including initiatives such as Civil Information Management, Foreign Humanitarian Assistance, and Nation Assistance. The remit of such units also extends to the preservation and restoration of protected targets such as healthcare facilities in war zones, facilitating links between military commanders and civil society. Civil affairs personnel have become increasingly integral to U.S. (and United Nations) peacekeeping operations in Iraq,

Afghanistan, Somalia, and the former Yugoslavia, while also contributing via short- and long-term aid efforts in countries such as Cambodia and Honduras.<sup>37</sup> Civil affairs units do not focus primarily on health issues, but, via the GHE paradigm, the U.S. military continues to develop international health and global health capacity in this context.

The development of systems by which the military can operate in closer cohesion with global health initiatives is central to the success of smart power strategies. These include consideration of the delivery of health assistance programs under *military umbrellas*, defined (in this context) as military support, advisement, protection, and coordination for health, development, and foreign assistance activities in unstable or insecure environments. While successful strategic outcomes may have been at least partially achieved in recent conflicts through global health roles in "armed social work," the dangers posed to non-military international development and diplomatic representatives have never been greater.<sup>38</sup> These include the increased incidence of violent deaths, abductions, and hostage situations involving formally and informally deployed personnel in regions as diverse as Sudan, Somalia, and Syria. To counter this threat, military intelligence, surveillance, and communications can provide support to assist a humanitarian response, allowing, for example, transportation and logistics to be fine-tuned for maximum impact and staff security. Careful and detailed advance liaison with local stakeholders, including health, military, and political representatives, can also help to ensure both health and strategic successes via a "hand off" to local personnel or organizations as the military departs.<sup>39</sup>

DOD policy guidance suggests that GHE initiatives should target activities on locations or regions "where there is humanitarian need balanced with operational and strategic significance."<sup>40</sup> Accessing unstable or ungoverned areas is a critical aspect of 21<sup>st</sup>-century U.S. military and diplomatic policy.<sup>41</sup> Two of the major smart power questions—"What are the positions and preferences

of the targets to be influenced?" and "What forms of power behavior are most likely to succeed?"—are linked to the objective of enhanced geographical influence and coverage by international actors.<sup>42</sup> Access to and development of an international presence in otherwise non-permissive areas provide opportunities for communications and education to populations whose only other alternative is often exposure to extremist propaganda, doctrine, and inculcation. Appropriately designed, selected, and adapted global health initiatives, operating in concert with the military umbrellas to provide protection and support, have been demonstrated in such circumstances to enhance both international influence and relations in remote geographical regions of countries such as Afghanistan and Iraq.<sup>43</sup>

International development and health programs have traditionally assisted with or been employed as tools of international lines of strategic intelligence and communication.<sup>44</sup> The recent outcry over the use of vaccination programs as a cover for intelligence-gathering activities in Pakistan elicited a range of dissociating responses from medical leaders, the White House, and other key actors at the State Department.<sup>45</sup> Arguments that objectives such as international security transcend those of international development suggest that such condemnations should be tempered by broader historical and contextual considerations.<sup>46</sup> The use of GHE surveillance from both the national and health security perspectives forms an explicit element of related DOD policy guidance.<sup>47</sup> The access granted to global health and development programs in insecure environments cannot be systematically leveraged or exploited in this ad hoc manner, both risking safety and security of program staff and jeopardizing future target population approval of any forms of international involvement. Rather, a compelling case for structures governing the use of strategic communications and observations, in either an explicit or an implicit manner, is made based on the tragic lessons learned from such experiences.<sup>48</sup>

## Training

GHD in the context of military personnel training will include the development of enhanced diplomatic and humanitarian skill sets, with a specific focus on improving strategic capacity within GHE staff and improving diplomatic and humanitarian capacity within combat staff. The Three Block War paradigm illustrates the complex spectrum of challenges and responsibilities likely to be faced during deployment or on the modern battlefield, including stability operations. The essence of such approaches is that both military and foreign assistance personnel must be trained to operate coherently in diplomatic, humanitarian, and combat capacities simultaneously rather than in a stovepiped fashion. Adaptations to the related “strategic corporal” approach build on the increasingly global consensus that leadership in complex, rapidly evolving, and potentially hostile health and security environments requires a much broader range of skills and training than previously considered necessary.

To achieve joint strategic and altruistic goals, the U.S. military may wish to invest further in the application of smart power and GHD contributions to GHE. This would include enhancing specialist diplomatic input on the choice of GHE interventions, the manner in which they are delivered, as well as their duration, sustainability, and alignment between medical and strategic considerations. These are of critical importance to “the evaluation of DOD GHE projects as a means to determine whether strategic theater objectives are satisfied,” with particular reference to unexpected health or non-health outcomes and consequences.<sup>49</sup> To date, in the United States and elsewhere, diplomatic, development, and military forces, when acting independently of each other, “may lack either the appropriate authority or resources to employ smart power,” risking “tense and confusing dualities” between agency agendas.<sup>50</sup> Such increased levels of interdepartmental cooperation are desirable yet have been exceedingly difficult to accomplish in practice.<sup>51</sup> The use of GHD

specialists, building on the development of GHE coordinators at DOD, will help to ensure the greatest possible strategic impact and alignment. Complementary inputs include advising on host-nation capacity for GHE project appropriateness and country ownership.<sup>52</sup>

## Conclusions

What do these recommendations imply for the future acceptability, prestige, and success of international interventions by the U.S. military and its allies? As the 21<sup>st</sup> century progresses, DOD is presented with a unique opportunity to establish itself not only as eminently capable of power projection but also as an altruistic and humanitarian organization. To achieve these noble goals, which echo the national and international respect and admiration for the Armed Forces in the immediate aftermath of World War II as exemplified by the Marshall Plan, decisionmakers may choose to support strategic plans using GHE as a key role for the Armed Forces, addressing contemporary “asymmetries of perception” surrounding the military’s role in international affairs.<sup>53</sup> It may be unrealistic to propose that significantly expanding the scope of GHE informed by GHD operating principles would single-handedly counter the doubts that have been generated by more recent armed conflicts in which the United States has engaged.

It is nonetheless hoped that such an enhanced role in both diplomatic and medical endeavors would augment the successful and simultaneous pursuit of development *and* strategic goals. Related initiatives such as Operation *United Assistance* have cast the U.S. military in a new light—as a highly responsive, effective, rapid response organization that has the capacity to contribute to national and also global health and non-health security.

A range of concerns and critiques related to U.S. military involvement in global health and broader international development programs deserves recognition. For example, the visible role that the military has played in recent disaster relief efforts from Haiti to Monrovia to Fukushima, and, most recently, the

response to the Ebola epidemic in West Africa, has elicited an abundance of commentary both supportive and questioning of the military’s role. The latter has been driven by events such as attacks on healthcare workers in Pakistan as a result of associations with security activities in pursuit of Osama bin Laden and more general concerns around the implications of military GHE “occupations.”<sup>54</sup> Such agendas, though potentially justifiable on the international and health security levels, cast doubt upon the viability of expanded collaborations between global health and geopolitical or geostrategic concerns.<sup>55</sup> Until these ambiguities are resolved, DOD GHE efforts will continue to be critiqued for “an ad hoc, short-term focus, poor appreciation of local cultural norms, inadequate high-level involvement, and a failure to properly assess effectiveness.”<sup>56</sup>

Issues of political and social legitimacy surrounding armed interventions are at least partially addressed through the integration of hard and soft power operations, helping to rebuild American military preeminence as an agent of good.<sup>57</sup> As a counterpoint, the pursuit of armed interventions that either ignore the health and well-being of civilian and other populations is increasingly unacceptable on social, political, and legislative bases—as well as being fraught with negative strategic consequences.<sup>58</sup> Global public opinion appears united in believing that the reported 100,000 civilian deaths during the Iraq conflict should never be allowed to happen again.<sup>59</sup> To limit the extent of such casualties and to improve military legitimacy, smart power efforts require critical funding decisions related to the military-industrial complex, including, where feasible and appropriate, advocacy for GHE in lieu of or complementary to ballistic alternatives. The past 3 to 5 years have already seen a dramatic evolution of the way GHE is designed, planned, and executed in many combatant commands. We advocate for the continuation, diplomatization, and acceleration of this process.

Former Chairman of the Joint Chiefs of Staff Admiral Mike Mullen has stated that “we have been leading with the military for far too long. We



need to get diplomacy, development, fiscal, economic, financial, and educational tools out in front. We cannot kill our way to victory. It's not going to work."<sup>60</sup> The limited effectiveness of the Transformational Diplomacy Doctrine under the George W. Bush administration is in direct contrast to the role of military GHE under a smart power system proposed in this article.<sup>61</sup> As the United States faces expansionism from a more aggressive China, a newly emboldened Russia, and the dangerous Islamic State of Iraq and the Levant, the pressure to maintain and develop international stability and balance of power has never been greater. The declining social, cultural, economic, and political thresholds of public tolerance for violently contested international conflicts that do not relate directly to national security indicate that with each passing decade, the U.S. military is becoming more wary of becoming embroiled in less-than-vital engagements.<sup>62</sup>

Given the rapidly changing and increasingly non-human or technological nature of combat, serving Soldiers, Marines, Sailors, and Airmen need to be gainfully occupied in meaningful ways during both peace and war. An enhanced role for GHD-based GHE would address this issue in an enlightened and also a self-interested fashion. Otherwise, as Sun Tzu teaches us, an unoccupied army quickly becomes restless—and may, ultimately, end up provoking the very conflicts it seeks to resolve. JFQ

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A-10 Thunderbolt II pilot, 74<sup>th</sup> Expeditionary Fighter Squadron, during deployment in support of Operation *Atlantic Resolve* at Graf Ignatievo, Bulgaria, March 18, 2016 (U.S. Air Force/Joe W. McFadden)

# NATO Nouvelle

## Everything Old Is New Again

By G. Alexander Crowther

The North Atlantic Treaty Organization (NATO) is heralded as the world's most successful military alliance. However, it finds itself under pressure from within and without. Some people in NATO countries do not understand the importance of its goal: to safeguard its members' freedom and security by political and military

means. This goal is executed through three mission sets: collective defense, crisis management, and cooperative security.<sup>1</sup> Other people outside NATO countries understand those missions well—and seek to destroy the Alliance.

Recent comments that NATO Allies are free-riders and calls for the United States to leave the Alliance are rooted in ignorance and do not take into account the reforms that NATO has sought, nor the importance of the Alliance in the 21<sup>st</sup> century. The end of the Cold War found 15 Allies in a defensive crouch in

Western Europe. Since that time, NATO expanded its mission set to include crisis management, and its area of operations to include Eastern Europe, the Middle East, the Horn of Africa, and Central Asia. NATO has become the center of the global coalition of the willing. The Alliance now has 28 members and another 41 partner nations through four different partnership programs. It has also reorganized several times, changing structure to account for changing mission sets. NATO today is an alliance that operates globally but is returning to

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NATO Parliamentary Assembly pre-summit conference in London, September 2, 2014 (NATO)

its original mission of collective defense. This article describes how the Alliance has changed since the end of the Cold War and where it is today. NATO has passed through the crisis management era and has returned to another era of collective defense.

## After the Cold War

*The 1990s.* At the end of the Cold War, some thought that NATO should be relegated to the dustbin of history along with the conflict that had birthed it. The Alliance survived, however, and managed to adapt to the new era, establishing the Partnership for Peace (PfP) program in 1994 to engage its former opponents of the Warsaw Pact. Additionally, NATO morphed the North Atlantic Cooperation Council to the Euro-Atlantic Partnership Council in 1997. It was designed to “strengthen and extend peace and stability in the Euro-Atlantic area, on the basis of the shared values and principles which underlie their

cooperation.”<sup>2</sup> NATO also contemplated expansion in the 1990s, producing a study on the subject in 1995.<sup>3</sup> As its final pre-9/11 mission set, NATO conducted three different operations to Macedonia during 2001–2003 to help mitigate rising ethnic tensions.

NATO also began to do out-of-area operations during the 1990s. The Alliance was designed to defend members against a Soviet offensive, not for expeditionary operations, but national forces did have expeditionary capabilities that NATO was able to tap into. Early operations included the deployment of both NATO Airborne Warning and Control System (AWACS) aircraft and the ACE Mobile Force (Air) and air defense packages to Turkey during the first Gulf War; assisting an international relief effort by flying teams of humanitarian assistance experts and medical advisors to Russia and other Commonwealth of Independent States nations in 1992 using AWACS trainer cargo aircraft following

the breakup of the Soviet Union; and providing increased AWACS coverage of the Central Mediterranean to monitor air approach routes from the North African littoral in May 1992 after the United Nations (UN) imposed sanctions on Libya after the Lockerbie bombing.

When Yugoslavia broke up in 1992, NATO became involved, usually in support of UN declarations. Because they saw it as a Slavic area, Russia opposed outside intervention in Yugoslavia. In summer of 1993, NATO started to enforce the UN arms embargo in the Adriatic Sea and enforced a no-fly zone declared by the UN Security Council, where NATO conducted its first combat operations when it shot down four Bosnian Serb aircraft on February 28, 1994. NATO began airstrikes in 1995, which were credited as a key factor in ending the war in Bosnia. The Alliance immediately deployed a 60,000-strong UN-mandated Implementation Force to the Balkans and then deployed a

32,000-strong Stabilization Force in December 1996 in support of the Dayton Peace Accords. NATO ended this operation in December 2004 and maintains a military headquarters in the country. NATO also entered Kosovo in June 1999 to end widespread violence and halt a humanitarian disaster, remaining there until 2008.

**September 11, 2001.** The 9/11 attacks gave NATO a new lease on life. In response to the attacks, NATO invoked Article 5 of the Washington Treaty, which states that “an armed attack against one . . . shall be considered an attack against them all” and went to the assistance of the United States.<sup>4</sup> This is the only time that Article 5 has been declared and was recognized as a watershed event, demonstrating the utility of the Alliance. In an immediate response, NATO executed Operation *Eagle Assist* from late 2001 to early 2002, conducting over 360 sorties of seven AWACS aircraft on patrol over the United States.<sup>5</sup>

## The 2000s

The early 2000s were a busy time for the Alliance. The largest and best-known mission was NATO leading the International Security Assistance Force (ISAF) in Afghanistan from August 2003 to December 2014. ISAF was one of the largest international crisis-management operations ever, bringing together contributions from over 50 countries. By the end of 2014, the process of transitioning full security responsibility from ISAF troops to the Afghan army and police forces was completed and the ISAF mission came to a close. On January 1, 2015, a new NATO-led noncombat mission called *Resolute Support* (to train, advise, and assist the Afghan National Security Forces and institutions) was launched.

During the second Gulf War in 2003, NATO deployed AWACS radar aircraft and air defense batteries to enhance the defense of Turkey. NATO later provided the training mission in Iraq from 2004 to 2011, training, mentoring, and assisting the Iraqi Security Forces.<sup>6</sup>

NATO participated in protecting public events, deploying forces in support

of the 2004 Olympic and Paralympic games held in Athens with Operation *Distinguished Games* and the Riga Summit in Latvia in 2006.

NATO practiced international disaster relief in the 2000s. In 2005, for instance, nine member nations moved 189 tons of supplies to the United States in the aftermath of Hurricane Katrina while also delivering 3,500 tons of supplies, engineers, medical units, and specialized equipment. In response to a request from Pakistan, NATO assisted in the urgent earthquake relief effort, which was one of the Alliance’s largest humanitarian relief initiatives to date. NATO has also helped coordinate assistance to other countries hit by natural disasters, including Turkey, Ukraine, and Portugal. It does this through its Euro-Atlantic Disaster Response Coordination Centre. In addition to missions in Central Asia and the Middle East, NATO moved into Africa in the 2000s, assisting the African Union in Darfur, Sudan, from 2005 to 2007, and beginning counterpiracy maritime patrols in the Gulf of Aden in 2008 and off the Horn of Africa in 2009.

**Libya 2011.** In the wake of UN Security Council Resolution (UNSCR) 1973 of March 17, 2011, several nations began operations in support of UNSCR goals. Initially, NATO enforced a maritime arms embargo, then a no-fly zone and, on March 31, ultimately took over sole command and control of all military operations for Libya. The NATO-led Operation *Unified Protector* had three distinct components:

- Starting on March 23, enforcing an arms embargo on the high seas of the Mediterranean to prevent the transfer of arms, related material, and mercenaries to Libya
- Starting on March 25, enforcing a no-fly zone to prevent any aircraft from bombing civilian targets
- Starting on March 31, commencing air and naval strikes against military forces involved in attacks (or threats to attack) on Libyan civilians and civilian-populated areas.

The operation officially ended on October 31, 2011, after participants

performed over 26,500 sorties, including over 9,700 strike sorties.<sup>7</sup>

## Current Operations

**Afghanistan Since 2015.** NATO currently leads Operation *Resolute Support*, a noncombat mission that provides training, advice, and assistance to the Afghan National Security Forces and institutions. The operation launched on January 1, 2015, and includes approximately 13,000 personnel from NATO and partner countries and operates with one hub in Kabul/Bagram and four spokes in Mazar-e Sharif, Herat, Kandahar, and Laghman.

As NATO has given up the combat mission in Afghanistan, this operation works with the Afghan government, ministry of defense, and military, providing functions including support planning, programming, and budgeting; assuring transparency, accountability, and oversight; supporting the adherence to the principles of rule of law and good governance; and supporting the establishment and sustainment of processes such as force generation, recruiting, training, managing, and development of personnel.<sup>8</sup>

Since NATO is an international organization that uses force, international law is an important basis for all operations. The legal basis of *Resolute Support* rests on a formal invitation from the Afghan government and the Status of Forces Agreement between NATO and Afghanistan. UNSCR 2189 of December 12, 2014, welcomes *Resolute Support* and underscores the importance of continued international support for the stability of Afghanistan, and it reflects NATO commitment to an enduring partnership with Afghanistan, reflecting the strengthening political consultations and practical cooperation within the framework of the NATO-Afghanistan Enduring Partnership signed in 2010.<sup>9</sup>

**Kosovo Since 2008.** Although the major NATO operation in Kosovo wrapped up in 2008, NATO maintains approximately 4,800 Allied troops there as part of NATO’s Kosovo Force, preserving the peace that was imposed in the wake of its deployment in 1999. Following

Kosovo's declaration of independence in February 2008, NATO agreed that it would continue to maintain its presence on the basis of UNSCR 1244, and has helped to create a professional and multi-ethnic Kosovo Security Force.<sup>10</sup>

**Monitoring the Mediterranean Sea Since 2001.** After the 9/11 attacks, NATO sought ways to counter the threat of international terrorism. In October 2001, it launched the maritime surveillance operation *Active Endeavour*, detecting and deterring terrorist activity in the Mediterranean. NATO has been systematically boarding suspect ships since April 2003. At the Warsaw Summit in July 2016, NATO leaders decided to transition Operation *Active Endeavour* to a maritime security operation now called *Sea Guardian*.<sup>11</sup>

**Counterpiracy off the Horn of Africa Since 2009.** The UN Secretary-General requested maritime protection for food convoys in the Gulf of Aden in 2008. NATO responded with Operation *Allied Provider* between October and December 2008.<sup>12</sup> The next iteration of NATO maritime protection was Operation *Allied Protector*, between March and August of 2009. The current mission is Operation *Ocean Shield*, approved on August 17, 2009, by the North Atlantic Council.<sup>13</sup> During this time NATO forces have worked closely with the European Union's Operation *Atalanta*,<sup>14</sup> the U.S.-led Combined Task Force 151,<sup>15</sup> and individual country contributors.

**Supporting the African Union Since 2007.** NATO also works ashore in Africa, supporting the African Union (AU) in its peacekeeping missions on the African continent since June 2007, providing airlift support for AU peacekeepers of the AU Mission in Somalia.

**Air Policing Missions Since 2004.** Air policing missions are collective peacetime operations that enable NATO to detect, track, and identify all violations and infringements of its airspace and to take appropriate action. Allied fighter jets patrol the airspace of Allies who do not have air superiority aircraft of their own such as Albania, Estonia, Latvia, Lithuania, Iceland, and Slovenia. Since

Russia's illegal military intervention in Ukraine in 2014, Russian operations tempo has risen while NATO has been taking extra reassurance measures for its Allies, including the deployment of additional aircraft to reinforce missions over Albania and Slovenia, as well as the Baltic region where NATO F-16s have intercepted Russian aircraft repeatedly violating allied airspace.<sup>16</sup>

While air policing has been a viable mission for NATO, Russian revanchism has caused some NATO members to rethink this approach. Recently a senior NATO commander visiting the Atlantic Council remarked that it is time for the air policing mission to change to an air defense mission because of additional threats and the fact that NATO has stopped routinely practicing air defense and badly needs practice in this basic defense function. This lack of experience at air defense missions is an example of NATO's lack of paying attention to high-end combat fundamentals, which became a second-tier priority when the Alliance paid more attention to crisis management rather than collective defense.

## Issues

While NATO has expanded its mission set and conducted operations from Iceland to Afghanistan, there have been issues, mainly at the political level.

**NATO Expansion.** One major issue for the Alliance has been the expansion of membership from 12 to currently 28 countries. Founded with 12 members, NATO integrated Greece, Turkey, West Germany, and Spain during the Cold War. After a study of the subject of expansion in 1995,<sup>17</sup> NATO further integrated the Czech Republic, Hungary, and Poland in 1999; Bulgaria, Estonia, Latvia, Lithuania, Romania, Slovakia, and Slovenia in 2004; and Albania and Croatia, who joined in 2009.<sup>18</sup> Currently, Montenegro is an "invitee," while three other countries "aspire" to membership: Bosnia-Herzegovina, Georgia, and Macedonia.<sup>19</sup>

The expansion into the former Warsaw Pact was contentious for two main reasons. First is the Russian reaction, while the second is whether the

Alliance could actually defend some of the easternmost countries, particularly the Baltics—Estonia, Latvia, and Lithuania. Russia has reacted negatively to NATO expansion into Eastern Europe. The Alliance is now less than 500 miles from Moscow. Russian issues with NATO expansion have become some of the major disinformation operations deployed by the government.

The discussion on defending countries such as those in the Baltics has two main thrusts: that they cannot be defended from Russian aggression and that Eastern European NATO members could drag NATO into an Article 5 situation by provoking Russia into an attack. One of the major discussion points at the July 2016 Warsaw Summit was preparation for the defense of the Baltics,<sup>20</sup> while Baltic and Polish visits to the United States always contain a discussion about how to ensure that the Alliance provides Article 5 mutual defense.

The idea of "cooperative security" as a mission set for NATO came from the Lisbon Summit in 2010.<sup>21</sup> The main programs are the Partnership for Peace program, Mediterranean Dialogue, and Istanbul Cooperation Initiative (ICI). NATO also partners with the EU through the Euro-Atlantic Partnership Council (EAPC) as well as with other like-minded nations around the world, often referred to as "partners across the globe."

The PfP was founded in 1994 and consists of 22 members: Armenia, Austria, Azerbaijan, Belarus, Bosnia and Herzegovina, Finland, Georgia, Ireland, Kazakhstan, Kyrgyz Republic, Malta, Moldova, Montenegro, Russia, Serbia, Sweden, Switzerland, Tajikistan, Macedonia, Turkmenistan, Ukraine, and Uzbekistan.<sup>22</sup> Twelve former PfP countries have become NATO Allies.<sup>23</sup>

The Mediterranean Dialogue was also founded in 1994 and consists of Algeria, Egypt, Israel, Jordan, Mauritania, Morocco, and Tunisia.<sup>24</sup> In the wake of the success of the Mediterranean Dialogue, the ICI was founded in 2004 and includes the following four countries of the Gulf Cooperation Council: Bahrain, Kuwait, Qatar, and the United Arab Emirates.<sup>25</sup>





Norwegian soldiers stand at attention during Baltic Air Policing change of command ceremony, April 30, 2015 (NATO)

The EAPC consists of all NATO member countries and the following partner countries: Armenia, Austria, Azerbaijan, Belarus, Bosnia and Herzegovina, Finland, Georgia, Ireland, Kazakhstan, Kyrgyz Republic, Macedonia, Malta, Montenegro, Republic of Moldova, Russia, Serbia, Sweden, Switzerland, Tajikistan, Turkmenistan, Ukraine, and Uzbekistan.<sup>26</sup>

“Partners across the globe” are a variety of countries who have similar goals, including Afghanistan, Australia, Iraq, Japan, Mongolia, New Zealand, Pakistan, and Republic of Korea.<sup>27</sup>

**Reforms.** During the Cold War, NATO had a variety of subordinate commands designed to fight a war against the Soviet Union. In general, these organizations reflected the need to fight on land, sea, and air in the north, center, and south of Europe. With the end of the Cold War, NATO undertook a series of transformations to adapt to the new world. Now NATO has Allied Command Operations (ACO), which is the warfighting headquarters, and Allied Command Transformation, which is responsible for

training, education, transformation, and so forth. Under ACO are two joint force commands as well as Allied Maritime Command, Allied Air Command, and Allied Land Command. There are nine rapidly deployable corps headquarters as well as Immediate Reaction Forces (Maritime).<sup>28</sup>

**Countering Terror.** NATO announced its “Policy Guidelines on Counter-Terrorism: Aware, Capable and Engaged for a Safer Future,” at the Chicago Summit in 2012. NATO policy has been informed by 9/11 and subsequent terror attacks.<sup>29</sup>

**Cyber.** Like many member nations, NATO has been challenged by the emergence of cyber operations. Russian political warfare has a large cyber component, which has been overtly used against Estonia, Georgia, and Ukraine and potentially used against national targets such as the Pentagon<sup>30</sup> and U.S. Democratic National Committee.<sup>31</sup> NATO made forward progress on developing cyber capabilities at the Wales Summit in 2014<sup>32</sup> and declared cyber to be a “domain” and announced further efforts to develop NATO capabilities while also assisting

member nations to develop their own at the July 2016 Warsaw Summit.<sup>33</sup>

**Paying Their Way.** Much has been made over the subject of NATO Allies providing funding to the organization. Nations agreed to spend 2 percent of gross domestic product (GDP) per year in 2010. Although the combined GDP of the other members is larger than that of the United States, the U.S. defense expenditure represents 73 percent of NATO spending, much of which is dedicated to high-demand, low-density capabilities such as intelligence, surveillance, and reconnaissance, air-to-air refueling, ballistic missile defense, and airborne electronic warfare.<sup>34</sup>

**National Caveats.** There are ongoing complaints by some Allies that others impose politically driven limitations on their operations through the use of national caveats.<sup>35</sup> During Operation *Unified Protector*, some nations positioned general and flag officers at the Combined Air Operations Center in Poggio Renatico, Italy. Their mission appeared to be to ensure that national caveats were respected. At times the development of the daily Air Tasking Order resembled a bidding



Members of visit, board, search, and seizure team of guided missile frigate USS *Taylor*, assigned to Commander, NATO Task Force 508, supporting Operation *Ocean Shield*, respond to disabled Yemeni fishing dhow *Nahda* in Gulf of Aden, May 20, 2012 (U.S. Navy/Peter Santini)

session, where the NATO planners sought to generate sufficient strike capabilities to complete the mission.<sup>36</sup> In spite of the use of national caveats, members always complete the mission. Although it sometimes requires the Deputy Supreme Allied Commander Europe to convene a force generation conference<sup>37</sup> or the Supreme Allied Commander Europe to call an occasional minister of defense with a request to waive a national caveat, NATO still managed to provide 40,000 personnel to the Afghanistan mission and generate enough strikes to complete the mission in Libya.

**Russia.** Russia regularly accuses NATO of aggression. The Russian Federation identified NATO as its first main external military risk in its military doctrine.<sup>38</sup> NATO has identified 32 different Russian claims about Alliance enlargement, NATO's attitude toward Russia, NATO as a threat, promises and pledges, and NATO operations,

and has refuted each of them.<sup>39</sup> NATO engaged Russia following the Cold War and the two cooperated regularly, reflected in both the Founding Act on Mutual Relations, Cooperation and Security between NATO and the Russian Federation (May 17, 1997),<sup>40</sup> and the announcement of the formation of the NATO-Russia Council (NRC) at the Rome Summit on May 28, 2002.<sup>41</sup> The NRC was formed to serve as the principal structure and venue for advancing the relationship between NATO and Russia;<sup>42</sup> however, NRC operations were suspended in the wake of Russian actions in Ukraine in April 2014.<sup>43</sup>

### NATO Today and Tomorrow

While it is easy to quantify what military assets NATO brings to the table, the Alliance provides ineffable qualities. Allies and partners form the international coalition of the willing, that is, nations who support similar goals such

as democracy, free trade, and rule of law. These states work together at the United Nations in regional fora and on a bilateral basis in support of global norms that have provided unparalleled peace and prosperity to the world. The Alliance sets standards of behavior, concepts of operations, and equipment that are followed around the world. These member nations also provide excellent examples to other states around the world that seek to emulate their progress.

One of the most important responsibilities that NATO members can fulfill is the need to tell their populations why the Alliance is important and how NATO helps each of them maintain the independence and freedom that they currently enjoy. Many misunderstandings about NATO could be resolved with modest but effective public affairs and public diplomacy programs. This would make it easier to prevent attacks on NATO from within and would allow political leaders



to make the case for spending 2 percent of GDP on NATO-usable equipment and formations.

Another imperative would be to study Russian political warfare. NATO members must understand what political warfare is and prepare to conduct counter-political warfare. Only then will NATO be resistant to outsider efforts to destroy the Alliance.

Although NATO has been a success, there is plenty of room for improvement. The ability to perform force generation has been an improvement; however, NATO has lost some of the capacity to perform modern force-on-force kinetic combat. This is particularly true of air defense, maritime operations, and combined arms operations integrating air, armor, and artillery. NATO should regularly exercise those capabilities.

Another lost art is generating and moving forces. At a recent conference about European defense, someone noted that the Very High Readiness Joint Task Force (VJTF), part of the NATO Response Force, deployed to Central Europe for an exercise on commercial aircraft, not using military airlift. This would cause problems if the VJTF were deploying into Poland or one of the Baltic states to reinforce a defense against Russia. Commercial companies would not be able to provide that type of transportation. Furthermore, NATO could no longer move military equipment and forces smoothly across European borders. During a recent deployment exercise, receiving nation customs and immigration officers stopped deploying forces at every border in order to clear them across. Since time is of the essence in a reinforcement scenario, NATO needs to develop the equivalent of a "Military Schengen Agreement" where forces are expedited across borders.

Dealing with infrastructure is another issue. During the Cold War, every bridge in West Germany was marked with a weight capacity and the Allies also had plans both to block and to cross all major rivers in their areas of operations. Bridges were built with chambers to facilitate the destruction in case of Russian attack, and bridging equipment

was prepositioned to support crossing rivers heading east. Bridges in the Baltics and Poland are neither marked nor prepared for demolition, nor is equipment identified or prepositioned to facilitate crossing rivers. Although these seem like minor issues, they represent not only the conceptual underpinnings of combat but also the degradation of NATO capabilities across the board in air, maritime, and land operations.

NATO needs to return to the basics, dust off the old manuals from the Cold War, and think through what is really required to successfully defend Eastern Europe. Only then will NATO be able to provide a realistic deterrent to Russia.

The North Atlantic Treaty Organization is the world's most successful military alliance, but it finds itself under pressure from within and without. NATO countries need to reexamine their roles in NATO's goal to safeguard the Allies' freedom and security by political and military means via collective defense as well as understanding that there are global actors who seek to destroy the Alliance. NATO has changed significantly since the end of the Cold War. Many of those changes have been for the good, but some have not. Issues remain. Reorganizations and global deployments have improved NATO's capabilities, but at a cost to the fundamental capability to perform high-end kinetic operations. Like the U.S. military, NATO has to recover from crisis management and regain capabilities lost during the last 15 years, while maintaining the lessons learned from what could be called the Crisis Management Era. JFQ

## Notes

<sup>1</sup> See "About NATO," available at <<https://nato.usmission.gov/our-relationship/about-nato/>>.

<sup>2</sup> "Basic Document of the Euro-Atlantic Partnership Council," May 30, 1997, available at <[www.nato.int/cps/en/natohq/official\\_texts\\_25471.htm?mode=pressrelease](http://www.nato.int/cps/en/natohq/official_texts_25471.htm?mode=pressrelease)>.

<sup>3</sup> "Study on NATO Enlargement," September 3, 1995, available at <[www.nato.int/cps/en/natohq/official\\_texts\\_24733.htm?](http://www.nato.int/cps/en/natohq/official_texts_24733.htm?)>.

<sup>4</sup> *Treaty of Washington*, April 4, 1949,

available at <[www.nato.int/cps/en/natohq/official\\_texts\\_17120.htm?](http://www.nato.int/cps/en/natohq/official_texts_17120.htm?)>.

<sup>5</sup> "Operations and Missions: Past and Present," July 12, 2016, available at <[www.nato.int/cps/en/natohq/topics\\_52060.htm?selectedLocale=en](http://www.nato.int/cps/en/natohq/topics_52060.htm?selectedLocale=en)>.

<sup>6</sup> Ibid.

<sup>7</sup> "Operation *Unified Protector* Final Mission Stats," November 2, 2011, available at <[www.nato.int/nato\\_static\\_fl2014/assets/pdf/pdf\\_2011\\_11/20111108\\_111107-factsheet\\_up\\_factsfigures\\_en.pdf](http://www.nato.int/nato_static_fl2014/assets/pdf/pdf_2011_11/20111108_111107-factsheet_up_factsfigures_en.pdf)>.

<sup>8</sup> "Resolute Support Mission in Afghanistan," June 13, 2016, available at <[www.nato.int/cps/en/natohq/topics\\_113694.htm](http://www.nato.int/cps/en/natohq/topics_113694.htm)>.

<sup>9</sup> United Nations (UN) Security Council Resolution 2189, S/Res/2189 (2014), December 12, 2014, available at <[www.un.org/en/ga/search/view\\_doc.asp?symbol=S/RES/2189%20\(2014\)](http://www.un.org/en/ga/search/view_doc.asp?symbol=S/RES/2189%20(2014))>.

<sup>10</sup> UN Security Council Resolution 1244, S/Res/1244 (1999), June 10, 1999, available at <<https://documents-dds-ny.un.org/doc/UNDOC/GEN/N99/172/89/PDF/N9917289.pdf?OpenElement>>.

<sup>11</sup> Warsaw Summit Communiqué, Issued by the Heads of State and Government Participating in the Meeting of the North Atlantic Council in Warsaw 8–9 July 2016, Paragraph 91, "We have transitioned Operation *Active Endeavour*, our Article 5 maritime operation in the Mediterranean, which has contributed to the fight against terrorism, to a non-Article 5 Maritime Security Operation, Operation *Sea Guardian*, able to perform the full range of Maritime Security Operation tasks, as needed." Available at <[www.nato.int/cps/en/natohq/official\\_texts\\_133169.htm?selectedLocale=en](http://www.nato.int/cps/en/natohq/official_texts_133169.htm?selectedLocale=en)>.

<sup>12</sup> "Operation *Allied Provider*," September 30, 2014, available at <[www.shape.nato.int/page13984631](http://www.shape.nato.int/page13984631)>.

<sup>13</sup> "Counter-Piracy Missions," July 12, 2016, available at <[www.nato.int/cps/en/natohq/topics\\_48815.htm?selectedLocale=en](http://www.nato.int/cps/en/natohq/topics_48815.htm?selectedLocale=en)>.

<sup>14</sup> European Union, "Countering Piracy off the Coast of Somalia," available at <<http://eunavfor.eu/>>.

<sup>15</sup> Combined Maritime Forces, "CTF 151: Counter-Piracy," available at <<https://combinedmaritimeforces.com/ctf-151-counter-piracy/>>.

<sup>16</sup> "Air Policing: Securing NATO Airspace," June 29, 2016, available at <[www.nato.int/cps/en/natohq/topics\\_132685.htm?selectedLocale=en](http://www.nato.int/cps/en/natohq/topics_132685.htm?selectedLocale=en)>.

<sup>17</sup> "Study on NATO Enlargement," September 3, 1995, available at <[www.nato.int/cps/en/natohq/official\\_texts\\_24733.htm?](http://www.nato.int/cps/en/natohq/official_texts_24733.htm?)>.

<sup>18</sup> "Factsheet: NATO Enlargement & Open Door," January 2016, available at <[www.nato.int/nato\\_static\\_fl2014/assets/pdf/pdf\\_2016\\_01/20160120\\_1601-factsheet\\_enlargement-en.pdf](http://www.nato.int/nato_static_fl2014/assets/pdf/pdf_2016_01/20160120_1601-factsheet_enlargement-en.pdf)>.

<sup>19</sup> "10 Things you need to know about NATO," available at <[www.nato.int/cps/en/natohq/126169.htm](http://www.nato.int/cps/en/natohq/126169.htm)>; Macedonia is another



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example of the perceived fecklessness of some members. Greece refuses to accept the name, insisting on calling it the “Former Yugoslav Republic of Macedonia” (FYROM). Greek officers assigned to NATO go so far as to weed search every document that they receive and provide feedback reminding authors of the requirement to call Macedonia “FYROM,” wasting a large amount of person-hours in bureaucratic wrangling.

<sup>20</sup> Warsaw Summit Communiqué, paragraph 78.

<sup>21</sup> “Cooperative Security as NATO’s Core Task: Building Security Through Military Cooperation Across the Globe,” last updated September 7, 2011, available at <[www.nato.int/cps/en/natohq/topics\\_77718.htm?selectedLocale=en](http://www.nato.int/cps/en/natohq/topics_77718.htm?selectedLocale=en)>.

<sup>22</sup> “Signatures of Partnership for Peace Framework Document,” January 10, 2012, available at <[www.nato.int/cps/en/natolive/topics\\_82584.htm](http://www.nato.int/cps/en/natolive/topics_82584.htm)>.

<sup>23</sup> Ibid.

<sup>24</sup> “Partners,” available at <[www.nato.int/cps/en/natohq/51288.htm](http://www.nato.int/cps/en/natohq/51288.htm)>.

<sup>25</sup> Ibid.

<sup>26</sup> Ibid.

<sup>27</sup> Ibid.

<sup>28</sup> “NATO Organization,” available at <[www.nato.int/cps/en/natohq/structure.htm](http://www.nato.int/cps/en/natohq/structure.htm)>.

<sup>29</sup> “Policy Guidelines on Counter-Terrorism: Aware, Capable and Engaged for a Safer Future,” May 24, 2012, available at <[www.nato.int/cps/en/natohq/official\\_texts\\_87905.htm?selectedLocale=en](http://www.nato.int/cps/en/natohq/official_texts_87905.htm?selectedLocale=en)>.

<sup>30</sup> Paul D. Shinkman, “Reported Russian Cyber Attack Shuts Down Pentagon Network,” *U.S. News & World Report*, August 6, 2015, available at <[www.usnews.com/news/articles/2015/08/06/reported-russian-cyber-attack-shuts-down-pentagon-network](http://www.usnews.com/news/articles/2015/08/06/reported-russian-cyber-attack-shuts-down-pentagon-network)>.

<sup>31</sup> Ruben F. Johnson, “Experts: DNC Hack Shows Inadequate U.S. Security Against Russian Cyber Attacks,” *Washington Free Beacon*, July 27, 2016, available at <<http://freebeacon.com/national-security/experts-dnc-hack-shows-u-s-no-defense-russian-cyber-attacks/>>.

<sup>32</sup> “Cyber Defense,” July 27, 2016, available at <[www.nato.int/cps/en/natohq/topics\\_78170.htm](http://www.nato.int/cps/en/natohq/topics_78170.htm)>.

<sup>33</sup> Warsaw Summit Communiqué, paragraphs 70 & 71.

<sup>34</sup> “Funding NATO, Indirect Funding of NATO,” available at <[www.nato.int/cps/en/natohq/topics\\_67655.htm?selectedLocale=en](http://www.nato.int/cps/en/natohq/topics_67655.htm?selectedLocale=en)>.

<sup>35</sup> General David Petraeus, USA, interview on Afghanistan, August 31, 2010: The Afghanistan mission “is certainly one team in which some of the different members have national caveats. . . . In Bosnia we had a matrix on the desk—I was the chief of operations there—and we had a matrix on the desk that had all the nations down one side and the missions and geographic areas across the top, and there were caveats, there were limits. That’s natural,

actually, again, that’s the way these play out. I would point out though that virtually every one of the troop-contributing countries here has sustained tough losses and tough casualties, and indeed some of the smaller countries, if you look at their losses per capita, Denmark, for example. You’ll see again that there is a great sharing of the hardship and sacrifice in this effort, without question.” Available at <[www.nato.int/cps/en/natohq/opinions\\_65854.htm?selectedLocale=en](http://www.nato.int/cps/en/natohq/opinions_65854.htm?selectedLocale=en)>.

<sup>36</sup> The author was a special assistant to the Supreme Allied Commander Europe at the time.

<sup>37</sup> “Troop Contributions,” June 27, 2016, available at <[www.nato.int/cps/en/natohq/topics\\_50316.htm?selectedLocale=en](http://www.nato.int/cps/en/natohq/topics_50316.htm?selectedLocale=en)>.

<sup>38</sup> Military Doctrine of the Russian Federation, December 25, 2014: “Build-up of the power potential of the North Atlantic Treaty Organization (NATO) and vesting NATO with global functions carried out in violation of the rules of international law, bringing the military infrastructure of NATO member countries near the borders of the Russian Federation, including by further expansion of the alliance.” Available at <<http://rusemb.org.uk/press/2029>>.

<sup>39</sup> “NATO-Russia Relations: The Facts,” December 17, 2015, available at <[www.nato.int/cps/en/natohq/topics\\_111767.htm?selectedLocale=en](http://www.nato.int/cps/en/natohq/topics_111767.htm?selectedLocale=en)>.

<sup>40</sup> Founding Act on Mutual Relations, Cooperation and Security between NATO and the Russian Federation signed in Paris, France, May 27, 1997, available at <[www.nato.int/cps/en/natohq/official\\_texts\\_25468.htm](http://www.nato.int/cps/en/natohq/official_texts_25468.htm)>.

<sup>41</sup> “NATO-Russia Relations: A New Quality: Declaration by Heads of State and Government of NATO Member States and the Russian Federation,” May 28, 2002, available at <[www.nato.int/cps/en/natohq/official\\_texts\\_19572.htm](http://www.nato.int/cps/en/natohq/official_texts_19572.htm)>.

<sup>42</sup> “The purpose of the [NATO-Russia Council] has been to serve as the principal structure and venue for advancing the relationship between NATO and Russia. Operating on the basis of consensus, it has sought to promote continuous political dialogue on security issues with a view to the early identification of emerging problems, the determination of common approaches, the development of practical cooperation, and the conduct of joint operations, as appropriate. Work under the [NRC] has focused on all areas of mutual interest identified in the Founding Act. New areas have been added to the NRC’s agenda by the mutual consent of its members.” See NATO-Russia Council, April 15, 2016, available at <[www.nato.int/cps/en/natohq/topics\\_50091.htm](http://www.nato.int/cps/en/natohq/topics_50091.htm)>.

<sup>43</sup> Ibid.



# Fighting with Friends

## Coalition Warfare in Korean Waters, 1950–1953

By Corbin Williamson

In late June 1950, President Harry Truman ordered U.S. forces into combat against the North Korean invasion of South Korea. One of the

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first units to respond was a combined U.S. Navy–Royal Navy task force with one aircraft carrier from each navy. Throughout the Korean War, British and American naval forces operated together to support the decisive actions on land. Although Anglo-American naval relations were close throughout the Korean War, these ties could be

strained and frayed when U.S. Navy commanders operated as though the Royal Navy was a mirror image of their own fleet. This case study in managing multinational operations serves as a timely reminder for commanders and operators of the importance of understanding the history and organizational structure of their coalition partners and



Corsairs returning from combat mission over North Korea circle USS *Boxer* as they wait for planes in next strike to launch, September 4, 1951 (U.S. Navy/NARA)

of being prepared to adjust practices and procedures based on this knowledge. The experience of Rear Admiral George Dyer illustrates the dangers of mirror-imaging coalition allies, even those as close as the Royal Navy.

Dyer took command of Task Force 95, the United Nations (UN) Blockading and Escort Force, in June 1951, after ending a tour as the deputy commandant of the National War College in Washington, DC. Dyer brought a great deal of experience to his new command, having held several staff and surface warfare positions in both the Pacific and Atlantic during World War II.<sup>1</sup> Task Force 95 was under the command of Seventh Fleet, which reported to Vice Admiral Turner Joy, Commander Naval

Forces Far East, and General Douglas MacArthur, the overall UN commander. The Task Force was responsible for three task missions: providing air and naval gunfire support along the Korean Peninsula's west coast, blockading North Korea on both coasts, and escorting convoys to and from Japan. The first mission, west coast air and gunfire support, fell to Task Group 95.2, commanded by a British officer, Rear Admiral Alan Scott-Moncrieff.<sup>2</sup>

### Dyer's Approach to Naval Bombardment

Dyer entered his position with a firm conviction about the role of naval power in Korea. He believed that his force should use more firepower

against the enemy than had previously been the case "in an effort to keep up the pressure on the Communists at a high level," a reference by Dyer to the ongoing armistice talks between Chinese and UN negotiators. From his perspective, the UN was giving away too much at the talks and increasing the military pressure on the Communists might force them into greater concessions.<sup>3</sup> Dyer's personal letters to friends and fellow officers back home frequently enumerated the total numbers of bombs and shells expended by Task Force 95. For example, in an August 1951 letter, he approvingly wrote that daily his ships were firing 500–1,000 shells and his planes were dropping 10–25 tons of bombs.<sup>4</sup> Under



his leadership, commanding officers who received fire from the shore and returned fire received top priority for awards and decorations. He told a friend in early 1952, "I believe that those who fight the war, in counter-distinction with those who are merely present while the fighting goes on about them, are deserving of some special recognition."<sup>5</sup>

Dyer's approach to naval bombardment aggravated the British, especially Scott-Moncrieff. He complained about Dyer's practice of judging "a ship's efficiency and aggressiveness . . . in proportion to the ammunition expended." The British admiral also deplored the "injunctions to 'get into the shooting war'" that came down from Dyer's flagship.<sup>6</sup> Britain's economy remained weakened from the strains of World War II and rationing was still in force in 1950. Accordingly, the Royal Navy sought to conserve ammunition by firing only at verified targets and by avoiding the American practice of "harassing fire." British and Commonwealth naval officers frequently complained about the extravagant American expenditure of ammunition. One Canadian officer described the U.S. Navy as an organization "seemingly run without regard for cost."<sup>7</sup>

Rear Admiral Scott-Moncrieff did not keep his negative feelings about Dyer and Dyer's views on bombardment to himself. He sent a message to one of the other senior officers in Task Force 95 describing an upcoming trip Dyer was taking to the west coast, commenting, "I hope he [Dyer] will cause no trouble," knowing full well that the message would be seen by junior officers throughout the Task Force.<sup>8</sup> Captain James Plomer, Commander Canadian Destroyers Far East, reported that he saw examples of other messages that brought Scott-Moncrieff and his staff's dislike of Dyer into the open. Plomer believed the situation was not helped by the "undercurrent of irritation with the Americans" and "frequent discouraging remarks and petty criticisms of the Americans and the American Navy" common on Scott-Moncrieff's staff. He also noted that the "rare exceptions" to this

pattern of criticizing the U.S. Navy were from British officers "who have served in the United States," a reminder that duty with another coalition partner often created advocates for closer cooperation or at least greater understanding. Plomer obliquely referred to Dyer as "the principal trouble-maker," while also pointing out that Scott-Moncrieff's chief of staff, Captain R.A. Villiers, was "strongly anti-American in outlook."<sup>9</sup>

### U.S. Navy Historical Practice

The lavish use of ammunition by the U.S. Navy in Korea did not begin with Dyer's time with Task Force 95. As the British naval advisor in Tokyo wrote in August 1950, in the U.S. Navy "more weight is put on the number of rounds you fire than where they fall."<sup>10</sup> In 1951, Admiral Guy Russell, the senior British naval officer in the western Pacific, ruefully commented to the First Sea Lord about American material abundance, "their ammunition expenditure would buy us another Cruiser Squadron or Carrier Task Force." Russell also reported that the captain of the battleship USS *New Jersey* "is bitterly disappointed if he doesn't fire his whole ammunition outfit each time up the coast."<sup>11</sup> The captain of HMAS *Warramunga*, Commander James Ramsay, described a visit to an American landing craft loaded with 5,000 rockets fired from 20 launchers. The American captain told Ramsay that "he had to restrain himself from firing for too long because the rockets cost the taxpayers 50 bucks each." Ramsay concluded, "it is rare to find the USN [U.S. Navy] practicing such self-restraint in bombardment."<sup>12</sup> As a result of this profligate expenditure of ammunition, in the first 2 years of the Korean War, U.S. Navy and U.S. Marine Corps aircraft dropped almost as many bombs as were dropped by these two Services in all of World War II.<sup>13</sup>

However, Dyer's efforts to link ammunition expenditure with rewards and promotions went beyond standard American practice. After Dyer's departure, succeeding American admirals worked to remove the links created by

Dyer between bombardment and promotion. In July 1952, Vice Admiral Robert Briscoe, the senior American naval officer in Korea, and Vice Admiral Joseph Clark, Commander Seventh Fleet, emphasized to their subordinates that evaluation reports "would not depend on the amount of ammunition" fired.<sup>14</sup>

### Diverging Styles of Command

In addition to diverging views about naval bombardment, Dyer's style of command damaged relations with the Royal Navy in Korea. The U.S. Navy divided command functions into three separate lines of authority: operational, type, and logistics. An operational commander assigned missions and ordered ships and aircraft to perform specific missions. The type commander handled administrative tasks such as assigning personnel to a warship, ensuring training requirements were met, and scheduling repairs. Logistics ships were set aside in a logistics force that reported to a logistics commander separate from the type and operational commanders. The purpose of this command structure was to free the operational commander from administrative and logistical responsibilities so that he could focus entirely on combat operations. The system also gave the commander maximum mobility and flexibility in operations, two characteristics that dominated operations in the Pacific theater in World War II.<sup>15</sup> In contrast, the British system of command combined operational, administrative, and logistical functions within a single command position located at a shore base.

Due in part to his World War II experience in the Pacific, Rear Admiral Dyer believed that the best way to command Task Force 95 was to be at sea with the fleet as much as possible. Several months after taking command, Dyer wrote to a fellow admiral in Pearl Harbor, "the only way I can do my job adequately is to visit the areas where the fighting is going on."<sup>16</sup> He frequently took his staff to sea with him in the heavy cruiser USS *Toledo* to visit his forces off Korea.<sup>17</sup>

Although Task Force 95 commanders before and after Dyer also went to sea,



Pilot from USS *Bon Homme Richard* bombs Korean bridge, November 1952 (U.S. Navy/NARA)

Dyer did so more frequently. This style of command caused two problems as far as Scott-Moncrieff and his staff were concerned. First, Dyer was frequently not present at his headquarters at Sasebo in Japan, which limited his day-to-day contact with liaison officers from the Air Force, Army, intelligence, and other organizations. This reduction in daily contact led to lower levels of cooperation between Task Force 95 and the various other organizations involved in fighting the Korean War. In the Central Pacific in World War II, the U.S. Navy largely ran the war as it saw fit with minimal contact with organizations not under the control of Admiral Chester Nimitz at Pearl Harbor. But Korea was different. Air support required constant coordination and communication with the Army and Air Force, while raids and island defense missions needed to be coordinated with multiple intelligence organizations.

Second, and more troubling for the British, Dyer's method upset the standing command arrangement in Task Force 95. Dyer's predecessor, Rear Admiral Allan Smith, as well as other previous Task Force 95 commanders, concentrated their attention on east coast operations, giving Scott-Moncrieff considerable autonomy over west coast operations. In contrast, Dyer's frequent trips to the west coast led to "a great deal of backseat driving," according to Scott-Moncrieff. Dyer's technique overturned the arrangement reached between Scott-Moncrieff and Dyer's predecessors under which the British operated with considerable autonomy on the west coast. But Dyer's visits to the west coast undermined this mission command agreement. In addition to diverging approaches to command, Dyer also did not explain the "why" when issuing orders, as was customary in the Royal Navy. Finally, the British found that

"any advice or question [upon receipt of Dyer's orders] appeared to be regarded as criticism or unwillingness." Dyer's leadership led many British captains to conclude that "they were not trusted" by the American admiral. Furthermore, the British desire to conserve ammunition combined with American pressure to expend it led the British to feel that Dyer "thought we were dragging our feet."<sup>18</sup>

Dyer's largely negative impact on relations within the command structure of Task Force 95 demonstrates the importance of understanding the traditions and culture of coalition partners. If Dyer had been more accommodating to the British or pursued closer personal relations with Scott-Moncrieff, perhaps much of the acrimony could have been avoided.

Other British naval officers found that close personal ties could bring considerable benefits in Korea. For example, relations at American naval headquarters

in Tokyo between the U.S. Navy staff and the British naval liaison officer stationed there remained close and harmonious throughout the war. Vice Admiral Turner Joy, the overall American naval commander in 1951, gave the British officer a desk inside the headquarters building and made him a part of the Admiral's staff. The liaison officer, Commander John Gray, helped provide the Admiralty with insight on American naval thinking while providing information to the Americans about British capabilities and intentions. Gray found that the personal connections he developed paid dividends. For example, the U.S. Navy briefed him on the classified plans for the landing at Inchon, information not provided to the British Army or Royal Air Force officers on the British embassy in Tokyo staff.<sup>19</sup>

### Change of Command

On May 31, 1952, Rear Admiral John Gingrich replaced Dyer as Commander, Task Force 95, much to the Royal Navy's relief.<sup>20</sup> In contrast to Dyer, who spent roughly half his time at sea, Gingrich preferred to remain at Sasebo, Japan, the task force's headquarters, and let his east and west coast commanders run operations on their own. Scott-Moncrieff reported that "relations became far easier" since Gingrich "has acted in accordance with the original intention, namely to remain for the most part in Sasebo." He concluded that Gingrich "has been most cooperative."<sup>21</sup> By mid-July, Vice Admiral Guy Russell, senior British naval officer in the Far East, reported that he was "happier than I have ever been about Anglo-American cooperation . . . the departure of the rather ambitious and possibly anti-British Admiral Dyer has made a great difference all round."<sup>22</sup> Canadian officers such as Commander John Reed also thought highly of Gingrich. Reed wrote that the American was "an excellent administrator" and a "most pleasant and tactful personality."<sup>23</sup> In addition to reverting to the previous pattern of command, Gingrich took steps to reduce ammunition expenditure, precisely the action Scott-Moncrieff had been advocating. Soon after relinquish-

ing command of Task Force 95, Gingrich told an audience at the Industrial College of the Armed Forces:

*In the Korean action I was commander of Task Force 95 and I was worried about our heavy expenditure of ammunition. When I took over Task Force 95, I found that we were firing 37,000 rounds of 5-inch ammunition on the east coast of Korea and 14,700 on the west coast of Korea [per month]. Much of this was unobserved fire. I gave instructions that I wanted air spots, shore fire-control spots, and director spots at the targets which were worth shooting at. I wanted to know specifically what damage was done, not that "great damage" was done. The result of this was that we cut down to 8,500 rounds on the east coast . . . on the west coast we cut down to 6,500 rounds.<sup>24</sup>*

Scott-Moncrieff could not have said it better himself.

Ironically, Dyer's correspondence reveals that he personally was quite pro-British. In July 1951 he expressed surprise that a French officer would head the new North Atlantic Treaty Organization Defense College, since he thought "it would have been on sounder grounds" for a British or American officer to hold that position. He wrote a friend in November 1952 that "the British are fine people and very friendly once they feel they have struck a response chord in Americans." He recalled in 1973, "I had a British flag officer serving underneath me [Scott-Moncrieff], a very fine one." However, Dyer's personal feelings could not overcome the animosity caused by his lack of consideration for the Royal Navy's patterns of operation.<sup>25</sup>

For the U.S. Navy, the Korean War provided considerable experience operating with coalition navies in combined formations using standard communications books and maneuvering procedures. This pattern of operating with allies continues to the present and foundational U.S. strategic documents highlight the importance of coalitions and partners.<sup>26</sup> However, Rear Admiral George Dyer's time in command of Task Force 95 placed considerable strain on coalition relations due to his failure to

adjust his methods and procedures to accommodate U.S. allies such as the British and Commonwealth navies. A greater appreciation for Britain's economic constraints might have led Dyer to at least exempt the Royal Navy from pressure to expend more ammunition. Ultimately, the U.S. Navy concluded that Dyer's approach to bombardment was not the preferred model. Furthermore, Dyer could have granted the British greater autonomy in their area of operations off the Korean east coast, as his predecessors and successors did. While overall relations between the Americans and the British and Commonwealth fleets were strong during the Korean War, Rear Admiral George Dyer's approach was a prominent exception. JFQ

### Notes

<sup>1</sup> Library of Congress Manuscript Division, "Biographical Note," George C. Dyer Papers, 1898–1988, available at <[http://findingaids.loc.gov/db/search/xq/searchMfer02.xq?\\_id=loc.mss.eadmss.ms008050&\\_faSection=overview&\\_faSubsection=bioghist&\\_dmdid=d16974e18](http://findingaids.loc.gov/db/search/xq/searchMfer02.xq?_id=loc.mss.eadmss.ms008050&_faSection=overview&_faSubsection=bioghist&_dmdid=d16974e18)>.

<sup>2</sup> Rear Admiral George C. Dyer, U.S. Navy (USN), to Mrs. E. Bacon, July 16, 1951, Folder 9, Box 1, George C. Dyer Papers, Naval Historical Foundation Collection, Manuscript Division, Library of Congress (LOC).

<sup>3</sup> Rear Admiral George C. Dyer, USN, to Lieutenant Commander David R. Sword, USN, December 20, 1951, Folder 1, Box 2, George C. Dyer Papers, Naval Historical Foundation Collection, Manuscript Division, LOC.

<sup>4</sup> Rear Admiral George C. Dyer, USN, to Mrs. E. Bacon, August 22, 1951, Folder 9, Box 1, George C. Dyer Papers, Naval Historical Foundation Collection, Manuscript Division, LOC.

<sup>5</sup> Rear Admiral George C. Dyer, USN, to Rear Admiral Clarence L.C. Atkeson, Jr., USN, January 4, 1952, Folder 2, Box 2, George C. Dyer Papers, Naval Historical Foundation Collection, Manuscript Division, LOC.

<sup>6</sup> Rear Admiral Alan K. Scott-Moncrieff, Royal Navy (RN), Flag Officer, Second-in-Command, Far East Station, "Report of Experience in Korean Operations, July 1951–June 1952," September 15, 1952, Part III, Section III, File 1926-102/11 Pt. 2, "Reports of Proceedings—Commander Canadian Destroyers—Far East, 1951–1953," Volume 8204, RG24-D-1-c, Library and Archives Canada.

<sup>7</sup> Commander James Plomer, Royal Canadian Navy (RCN), Commander Canadian





Supply warehouses and dock facilities at this important east coast port feel destructive weight of paradedemolition bombs dropped from Fifth Air Force's B-26 Invader light bombers, Wonsan, North Korea, 1951 (U.S. Air Force/NARA)

Destroyers, Far East, "Korea War Report, Part One" 1952, 26, Folder Korean War Report—Part One, HMCS *Cayuga*, July 1951–June 1952, File 2, Box 109, 81/520/1650-238/187, Directorate of History and Heritage (DHH).

<sup>8</sup> Commander James Plomer, RCN, Commander Canadian Destroyers, Far East, "Korea War Report, Part Two" 1952, 4, Folder Korean War Report—Part Two, 1952, File 3, Box 109, 81/520/1650-238/187, DHH.

<sup>9</sup> Commander James Plomer, RCN, Commanding Officer, HMCS *Cayuga*, "Korea War Report, Part Two" 1952, Section I, Folder Korean War Report—Part Two, File 3, Box 109, 81/520/1650-238/187, DHH.

<sup>10</sup> Commander J.M.D. Gray, RN, Naval Advisor Tokyo to Commander in Chief, Far East Station, "NA 41/792/50," August 9, 1950, 7, ADM 116/6227, National Archives of the United Kingdom (NAUK).

<sup>11</sup> Admiral Guy Russell, RN, Commander in Chief, Far East Station to Admiral Bruce Fraser, RN, First Sea Lord, October 23, 1951, 4–5, ADM 205/76, NAUK.

<sup>12</sup> Commander James M. Ramsay, Royal Australian Navy (RAN), Commanding Officer, HMAS *Warramunga* to Captain (D), 10<sup>th</sup> Destroyer Flotilla, HMAS *Bataan*, March 1, 1952, 358/3, AWM78, Australian War Memorial (AWM).

<sup>13</sup> "US Navy—Items of General Interest," Appendix 1 to Commodore Morson A. Medland, RCN, Naval Member, Canadian Joint

Staff (Washington) to Naval Secretary, "CANAVUS Report of Proceedings for November 1952," December 3, 1952, 2, Folder HMCS *Niagara* (Base) 1952, File 5, HMCS *Niagara* (Base) Reports of Proceedings, 1952, Box 145, 81-520-8000, DHH.

<sup>14</sup> Vice Admiral Guy Russell, RN, Commander in Chief, Far East Station to Admiral Rhoderick R. McGrigor, RN, First Sea Lord, "D/010," July 12, 1952, 5, ADM 205/86, NAUK.

<sup>15</sup> For a modern, similar example of the command system at work see Thomas Cutler, *The Citizen's Guide to the U.S. Navy* (Annapolis, MD: Naval Institute Press, 2012), 56–58.

<sup>16</sup> Rear Admiral George C. Dyer, USN, to Rear Admiral John W. Roper, USN, October 28, 1951, Folder 1, Box 2, George C. Dyer Papers, Naval Historical Foundation Collection, Manuscript Division, LOC.

<sup>17</sup> Rear Admiral George C. Dyer, USN, to Rear Admiral Allan E. Smith, USN, July 24, 1951, Folder 9, Box 1, George C. Dyer Papers, Naval Historical Foundation Collection, Manuscript Division, LOC; Rear Admiral George C. Dyer, USN, to Mrs. E. Bacon, July 16, 1951.

<sup>18</sup> Rear Admiral Alan K. Scott-Moncrieff, RN, Flag Officer, Second-in-Command, Far East Station, "Report of Experience in Korean Operations, July 1951–June 1952," Part II.

<sup>19</sup> See Commander J.M.D. Gray, RN, Naval Advisor Tokyo to Commander in Chief, Far East Station, "NA 41/16/51, Sixth Report of Proceedings," January 4, 1951, 2, 4, ADM

116/6227, NAUK; Commander J.M.D. Gray, RN, Naval Advisor Tokyo to Commander in Chief, Far East Station, "NA 41/1189/50, Fifth Report of Proceedings," December 1, 1950, 3, 5, ADM 116/6227, NAUK; Commander J.M.D. Gray, RN, Naval Advisor Tokyo to Commander in Chief, Far East Station, "NA 41/912/50, Third Report of Proceedings," September 28, 1950, 3, 4, ADM 116/6227, National Archives of the UK; Commander J.M.D. Gray, RN, Naval Advisor Tokyo to Commander in Chief, Far East Station, "NA 41/792/50."

<sup>20</sup> Rear Admiral George C. Dyer, USN, to Lieutenant Commander Joseph Raymond Tenanty, USN, February 12, 1952, Folder 2, Box 2, George C. Dyer Papers, Naval Historical Foundation Collection, Manuscript Division, LOC.

<sup>21</sup> Rear Admiral Alan K. Scott-Moncrieff, RN, Flag Officer, Second-in-Command, Far East Station, "Report of Experience in Korean Operations, July 1951–June 1952," Part II.

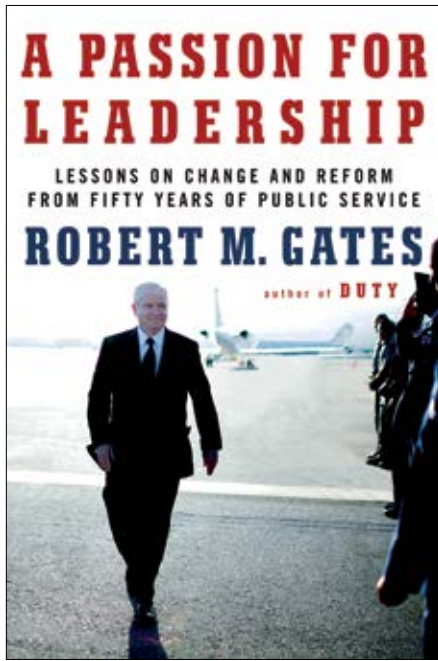
<sup>22</sup> Vice Admiral Guy Russell, RN, Commander in Chief, Far East Station to Admiral Rhoderick R. McGrigor, RN, First Sea Lord, "D/010," 3.

<sup>23</sup> Commander John C. Reed, RCN, to Commander, Canadian Destroyers, Far East, "Report of Proceedings, February 1953," March 17, 1953, 1, File 1926-355/31 Part 2, "HMCS *Athabaskan*—Report of Experience in Korean Operations, 1950–1953," Volume 11374, RG24-D-22, Library and Archives Canada.

<sup>24</sup> Vice Admiral John E. Gingrich, USN, Chief of Naval Material, "Publication No. 154-54, Military Procurement" (Industrial College of the Armed Forces, November 18, 1953), 3, available at <<https://merln.ndu.edu/u2/icaarchive,38044>>.

<sup>25</sup> Rear Admiral George C. Dyer, USN, to Lieutenant General Harold R. Bull, USA, July 31, 1951, Folder 9, Box 1, George C. Dyer Papers, Naval Historical Foundation Collection, Manuscript Division, LOC; Rear Admiral George C. Dyer, USN, to Commander Joseph A. Houston, USN, November 18, 1952, Folder 4, Box 2, George C. Dyer Papers, Naval Historical Foundation Collection, Manuscript Division, LOC; Reminiscences of Vice Admiral George C. Dyer, USN (Ret.), interview by John T. Mason, Jr., 1973, 521, U.S. Naval Institute Library, Annapolis, MD.

<sup>26</sup> U.S. Department of Defense, *The National Military Strategy of the United States of America*, 2015, 8, available at <[www.jcs.mil/Portals/36/Documents/Publications/National\\_Military\\_Strategy\\_2015.pdf](http://www.jcs.mil/Portals/36/Documents/Publications/National_Military_Strategy_2015.pdf)>; U.S. Department of Defense, *A Cooperative Strategy for 21<sup>st</sup> Century Seapower*, March 2015, 2, available at <[www.navy.mil/local/maritime/150227-CS21R-Final.pdf](http://www.navy.mil/local/maritime/150227-CS21R-Final.pdf)>.



## A Passion for Leadership: Lessons on Change and Reform from Fifty Years of Public Service

By Robert M. Gates  
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Reviewed by Christopher J. Lamb

Robert Gates's previous memoirs on his time at the Central Intelligence Agency (CIA) and on the National Security Council staff as well as his tenure as Secretary of Defense were well received as "ultimate insider" accounts. Gates's latest book, *A Passion for Leadership*, is different but should prove just as popular for different reasons. Gates distills his government experience, along with his service as president of Texas A&M (the Nation's fifth largest university), into a treatise on leadership. It is a fitting capstone to an illustrious career, during which he "worked for eight U.S. presidents . . . and observed or worked with fourteen secretaries of state, thirteen secretaries of defense, nine chairmen of the Joint Chiefs of Staff, fourteen national secu-

rity advisers, ten directors of the CIA," and innumerable senior military officers and diplomats. He has observed and exercised a lot of leadership and believes he has something important to say about the topic. He is right.

Gates wrote the book to convince rising leaders that the quest for reform is worthwhile and to suggest some tools and personal attributes helpful for leading change. The book is structured accordingly. It begins with the frank acknowledgment that U.S. institutions "are failing us." Gates surveys a litany of "disasters and embarrassments" and concludes that reform is "not a luxury but a necessity." Rejecting the indifference of the political left about the need for reform and the cynicism of the political right about feasibility, Gates sets out to convince readers that "bureaucracies can be fixed; changed, made more cost-effective, user-friendly, efficient and responsive, and shaped to meet new problems and challenges even in an age of austerity." The rest of the book backs up this assertion with numerous examples from his experiences leading three very different institutions.

In a chapter on how to determine the kind of change an organization needs, Gates underscores the value of listening to the organization's rank and file—one of the major reasons he was a popular leader. He makes a strong case for pursuing change with a deliberate strategy, which sounds like common sense but often is overlooked, as Gates points out. The next chapter, on "techniques for implementing change," is perhaps the most intriguing and useful. Gates offers many "how to" insights well illustrated by his long career. For example, he elaborates on his distinction between micro-knowledge and micromanagement, an important subject he raised in *Duty: Memoirs of a Secretary at War*, his Pentagon memoir.

Gates's prescriptions are too numerous to list, but several of the more important ones deserve emphasis. With characteristic candor, Gates notes that "any fool can (and all too often does) dictate change from the top," but such reform by diktat is seldom successful. He

argues that the ground has to be prepared and that involvement by as many people as possible, especially career professionals, is necessary. But leaders must then take bold action that runs counter to institutional preferences because, he argues, bureaucracies inevitably believe things are fine just as they are.

A "leader focused on bringing significant change must find a way to break up the bureaucratic concrete and create the opportunity to develop new thinking and approaches," Gates states. His preferred mechanism for doing this was cross-cutting task forces:

*Task forces and similar ad hoc groups are silo busters. Most bureaucracies—both private and public—are rigid, pyramid-like structures in which information is shared with those in ever-higher boxes in the structure but rarely laterally. Properly designed task forces make diverse elements within an institution communicate and coordinate with one another at a level not achievable within the daily routine.*

Gates warns that task forces cannot be allowed to make consensus decisionmaking their priority, in which case they will end up producing mere "pap." To avoid this trap, leaders must carefully structure the task forces. They must choose the right leaders, prepare strong and detailed charters, and monitor the task force's work carefully and repeatedly, both to protect and empower them. They need protection "to keep the bureaucracy from smothering their efforts." They need empowerment to "carry out the task" and "space to show what they can do." He believes in empowering subordinates and "staying out of their hair." The leader must point to the change needed but must recognize the task force may "come up with a different way of implementing it." Gates considers task forces "immensely useful, indeed crucial for developing specific proposals, for implementation of reforms and for tracking progress," and observes that "with only a couple of exceptions, virtually every task force I appointed improved on and enriched my ideas and often expanded the scope of the change."

Toward the end of the book, Gates turns to the importance of building relationships and acting with integrity. His conviction that we need leaders who will engage all stakeholders civilly and act honorably in all matters large and small may seem like boilerplate to some readers, but he communicates these traditional values with verve. For example, he asks bluntly: Why we should trust a leader if his or her spouse cannot? Gates also offers many positive examples of leadership probity. Indeed, all the leadership virtues and vices Gates catalogues are illustrated with telling examples from his personal experience.

As well-written and full of practical wisdom as this book is, it left this reader disquieted. Gates's solution for rampant poor organizational performance is stellar leaders. Yet he also believes "Americans have, at every level, the most dedicated, capable, and honest public servants anywhere." He notes that it has been his privilege to work with leaders of impeccable character—and he names many. He also argues that contrary to public perceptions, and especially in the national security bureaucracy, civil servants work extremely hard, putting in 70-hour weeks and foregoing vacations.

With so many hard-working civil servants led by men and women of impeccable character, why are our institutions failing? Could better leadership alone carry off the kind of transformation change Gates claims is imperative? At the outset of the book, Gates lists a number of reasons why reform is hard, but he never really offers a compelling explanation for the poor organizational performances he lambasts. The closest he comes is singling out "the same pyramidal, hierarchical structures, and lack of lateral communication, that pervade the public sector" and "also negatively affect the private sector." Gates does not say so, but many other observers have concluded these kinds of structures are ill suited to the 21<sup>st</sup>-century environment. Relying on great leaders alone to correct the poor performance of these antiquated structures is problematic for two reasons.

First, stellar leaders do not come along often. Gates quotes Jacques

Barzun's observation that governing well requires both the political skills to discern what can and needs to be done and how to mobilize support for the undertaking, and the administrative skills with which one imposes order when everything continually tends toward disorder. Truly gifted leaders with these skills are the exception. In fact, as Gates acknowledges, "real leadership" in general "is a rare commodity." So relying on the great leader to lift institutional performance to new levels when so much of the government is headed in the opposite direction seems like a long shot.

Second, transforming organizations requires more than good leadership. Washington, DC, is full of self-confident people, so the emphasis on great leaders and boiling organizational reform down to "just good leadership" is not surprising. But leading transformational change requires engaging elements of organizational performance other than leadership, including organizational structure, culture, processes, and so forth. This may explain why the only thing rarer than good leadership in Washington is success at transformational organizational reform. As Gates confesses, "The truth is that dramatic reform efforts in public institutions, certainly at the federal level, are so rare that examples are hard to come by."

According to Greg Jaffe in his *Washington Post* book review of *Duty*, Gates is "widely considered the best defense secretary of the post-World War II era." Anyone reading his book on leadership will profit. But are his prescriptions sufficient for transformational change? More pointedly, did he transform the Department of Defense rather than just lead it exceptionally well? His two main goals were getting the department to take irregular security challenges seriously and delivering more capability on a tighter budget. Most observers would argue the department's performance has not been transformed for lasting effect in either respect.

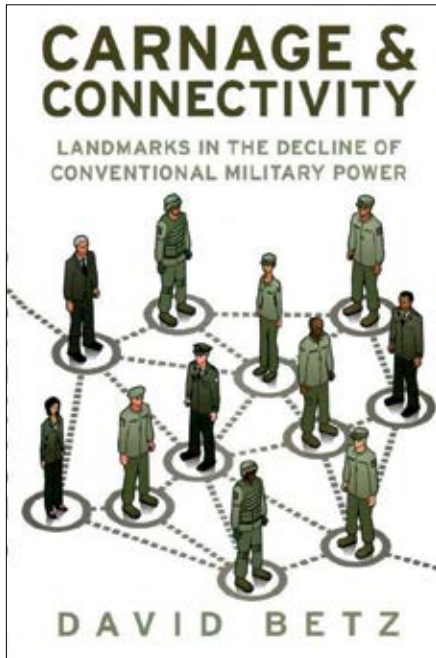
Gates acknowledges there is more to be done. In fact, that is how he concludes: by arguing that organizational reform is a never-ending challenge. But

it is not clear he accepts the ephemeral nature of his own leadership interventions and the depth of change required to transform "pyramidal, hierarchical structures." Consequently, the book Gates intended to be uplifting may instead leave aspiring leaders with some worrisome thoughts—namely, that the Robert M. Gateses of this world are few and far between and that the organizations failing us are more recalcitrant than Gates appreciates. For these rising leaders, who Gates states he knows are "often frustrated by the shortcomings of their institutions" and who want "to be proud of the organizations they work for," the wait for truly transformational prescriptions continues. JFQ

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## Carnage and Connectivity: Landmarks in the Decline of Conventional Military Power

By David Betz

Oxford University Press, 2015

264 pp. \$50

ISBN: 978-0190264857

Reviewed by Jeffrey Meiser

One approaches the first few pages of *Carnage and Connectivity* with a sense of trepidation. Do we need another book invoking Carl von Clausewitz's "remarkable trinity" to explain the changing character (but not nature!) of war? Do we need another book critiquing revolutions in military affairs (RMAs) as unrealistic technophilia? Do we need another book parsing the meaning of cyber power? With a deep sense of foreboding I plowed on, expecting my pessimism to be confirmed. But then I encountered pithy writing, unique insights, and even detected a sense of humor. While *Carnage and Connectivity* covers well-trodden ground, it does so with exceptional clarity, biting critiques, and the self-confident voice of a seasoned (if not cynical) scholar.

The book proceeds more or less according to the Clausewitzian framework

of "passion, chance, and political purpose." The first chapter covers Clausewitz 101 in a clean and clear manner, so much so that a beginner in strategic studies could easily read this book without prerequisites. The next chapter describes the historical, social, and cultural context of contemporary war. David Betz makes the nuanced point that every era has its own particular context but that analysts of every era exaggerate the uniqueness of their predicament. He argues that "the passions which drive us to compel others to do our will have themselves not disappeared" (p. 32), but warfare has decentralized and shown a tendency to mutate rather than come to a neat conclusion. War is not obsolescent (as the heirs of Norman Angell argue), it has not fundamentally changed (as "new war" theorists argue), and we cannot master it through technology alone (as some advocates of RMA contend). This last point is the subject of chapters three and four, a particularly devastating critique of proponents of concepts such as "dominant battlespace knowledge," "rapid dominance," and "network-centric warfare." Betz bemoans the transformation of American strategic thinking in the 1990s with this memorable reproach: "The blind faith in military technology that it [RMA] evinced would prove to be the most self-defeating habit of mind since the cult of the offensive wrong-footed the generals of the First World War" (p. 57).

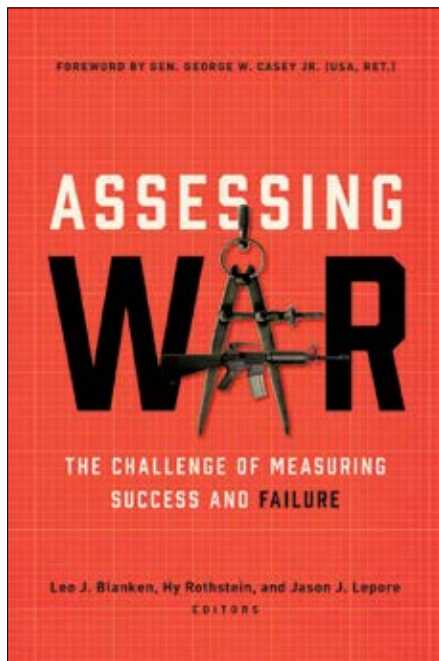
The "tactical hubris and strategic vacuity" of the 1990s set the stage for conflicts of the early 2000s. During the short-lived optimism of 2003, RMA optimists invoked a "new American way of war" to explain the emerging era of U.S. military dominance based on speed and information. Betz is unimpressed: "It is hard to imagine any of history's great commanders—Zhukov, Patton, Sharon—bothering to list the defeat of Iraq in 2003 on their resumes" (p. 77). Not only was the fighting largely one-sided, but the United States also failed to establish anything approaching perfect situational awareness and, most importantly, failed to understand that rapidly destroying armored vehicles does not mean that you have broken the will of the enemy.

The alleged technocentrism of the "new American way of war" ignores a fundamental component of war, what Clausewitz called the "moral factor." Betz explains that standoff precision weaponry is no substitute for the will to victory. The renewed importance of "war amongst the people" increases the significance of the moral factor because these wars are protracted, indecisive, and, most importantly, dependent on generating psychological effects among a foreign population. According to Betz, the United States and its allies are particularly disadvantaged in this area because we are a postmodern people resistant to nationalist appeals and Manichean worldviews; we are "post-heroic," jaded, and detached. In one sentence Betz does more to explain our current reality than a shelf full of strategy books: "A materially weak actor who nonetheless does not believe in his powerlessness possesses a paradoxical strength which can outmeasure that of a materially greater opponent who does not believe in his own power."

In his concluding chapters, Betz shifts to a somewhat belabored discussion of cyber power that makes use of an interesting comparison with the emergence of airpower in the early 1900s. This discussion does not add much to the already extensive debate on the cyber dimension for a professional military audience. Despite this disappointing conclusion, the core chapters of *Carnage and Connectivity* present a compelling explanation of the strategic failures of the United States and its allies over the past decade and a half of war. Betz does not provide any neat solutions to our problems, but his text does provide a clear diagnosis of the root cause: our leaders have neither given us a compelling reason for the sacrifices we have made in Iraq, Afghanistan, and beyond, nor have they found allies fundamentally committed to victory. No amount of technological sophistication or tactical proficiency can make up for this intellectual and strategic failure. JFQ

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## Assessing War: The Challenge of Measuring Success and Failure

Edited by Leo J. Blanken, Hy Rothstein, and Jason J. Lepore  
Georgetown University Press, 2015  
376 pp. \$64.95  
ISBN: 978-1626162457

Reviewed by Jonathan Schroden

Dr. Philip Meilinger of the Air University once wrote that “one of the most vital yet difficult tasks a wartime commander must perform is strategic assessment.” And yet, as the editors of *Assessing War* rightfully point out, strategic assessment is a topic that has been underserved by academic and military writers to date. It is into this void that *Assessing War* commendably charges, with three primary goals: to compile a set of in-depth historical accounts of a crucial, yet neglected, aspect of military history; to refresh our understanding of the assessment problem by refining our models in light of the evolving wartime environments we observe today and may find in the future; and to generate recommendations to assist in establishing future policy, strategy, and doctrine. This is a heady set of goals for one book, and

*Assessing War* ultimately delivers a mixed performance in accomplishing them.

The book is strongest in its presentation of history. The dozen chapters looking at cases spanning from the Seven Years’ War to contemporary conflicts in Iraq and Afghanistan represent a major contribution to the discourse on this topic, even though the chapters themselves vary widely in quality. The best include the chapters by Edward G. Lengel (the Revolutionary War), Brooks D. Simpson (U.S. actions to subdue rebellion in 1861), Michael Richardson (U.S. cavalry operations against the Plains Indians), Bruce McAllister Linn (the Philippine War), and William C. Hix and Kalev I. Sepp (the Iraq War). The last of these especially fills a major gap, as little has been written about assessment in the Iraq War to date. Some chapters, most notably one about how al Qaeda assesses its progress and one on “alternative dimensions of assessment,” are fascinating but relatively out of place, while others—most notably those by John Grenier (Seven Years’ War) and Alejandro S. Hernandez, Julian Ouellet, and Christopher J. Nannini (Afghanistan)—completely miss the mark. But such unevenness is often the norm in an edited volume, and it should not detract from the utility of these works as a whole—there is much of value to be found here.

The book attempts to provide a new, useable model of strategic assessment for practitioners, but it struggles from the beginning. One major reason for this is the book’s confusion of terms; authors continually conflate *wartime* assessment, *strategic* assessment, and *operations* assessment, and in some cases other forms (for example, *intelligence* assessment) also creep in. This lack of singular understanding of the topic dilutes the section on theory, which is mostly aimed at strategic assessment (are we winning the war?) but also touches inconsistently on operations assessment (are we successfully prosecuting military campaigns?). The concepts presented, such as the “metrics triangle,” principal-agent models, the “Clausewitzian Gap,” and the dominant indicator theory, are rendered more as interesting abstractions than useable models.

That is not to say there is nothing of value here for practitioners. Numerous important points are discussed—for example, that assessments can and do significantly influence the behaviors of the units and individuals being assessed. This aspect of assessment is one of the most overlooked in my experience and the one that can have the most disastrous consequences, both in terms of missed opportunities to shape outcomes and in creating incentives for counterproductive actions.


The book’s greatest weakness is its inability to synthesize its theoretical concepts and empirical examples to generate new insights for the field of strategic assessment. More work should have been done to pull consistent threads across the concepts and cases presented in order to explicitly offer the reader something of enduring value at the book’s conclusion. To be sure, there are many issues pertaining to strategic assessment that could have been broached—for example, whether assessment approaches used in the Revolutionary or Civil wars are still viable today, given increases in the complexity of the battlefield and in our national command structures, or whether technological advances in areas such as communications have improved our ability to assess progress (by “flattening” the battlefield) or made things worse (by generating volumes of data beyond what we can process and interpret). That the book eschews any real attempt to learn from its component chapters and address critical issues facing the future of strategic assessment is its most disappointing aspect.

So what is the overall assessment of *Assessing War*? To use the pithy yet unfortunate assessment lexicon of the day, the book is “green” when it comes to its first goal, “yellow” for its second, and decidedly “red” for its third. Does this mean it is a success or a failure? The ambiguity of that question and the data available to answer it lies at the heart of every strategic assessment—a final point the book would have done well to address better. JFQ

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Danish soldier rushes objective during live-fire exercise at Joint Multinational Training Command's Grafenwoehr Training Area in Germany, July 4, 2014 (DOD/Markus Rauchenberger)

# Let's Fix or Kill the Center of Gravity Concept

By Dale C. Eikmeier

The current revision of Joint Publication (JP) 5-0, *Joint Operation Planning*, provides an opportunity to fix the flawed description of the center of gravity (COG) concept. The description is constructed so poorly that it has fueled endless debate and created volumes of articles and papers—all for something that is supposed to be clearly understood and accepted as the “linchpin in the planning effort.”<sup>1</sup> This article proposes a new COG definition that moves away from a Clausewitzian

foundation toward a modern 21<sup>st</sup>-century concept that can end years of debate and let the concept become the useful tool doctrine intended.

The main flaws fueling the doctrinal concept's debate are its Clausewitzian foundation and its use of imprecise metaphors. When we use metaphors to define something, we do not really understand it. This imprecision, first introduced in Army doctrine in 1986 and joint doctrine in 1994, created a cottage industry of theoretical debate that rages

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Soldiers, 5<sup>th</sup> Special Forces Group jump masters, check drop zone prior to jumping from C-130J Super Hercules over Fort Campbell, Kentucky, May 21, 2014 (U.S. Air Force/Jonathan Snyder)

on to this day.<sup>2</sup> This debate has three camps: the Clausewitzian traditionalists, the rejectionists, and between them, the accommodators, who are perhaps a bit quixotic in their quest to fix the concept.

The Clausewitzian traditionalists, best represented by Antulio Echevarria II of the U.S. Army War College, have sought to correct the doctrine's flaws by going back to Carl von Clausewitz himself and his seminal *On War*, often in the original German, and trying to divine what he *really* meant. Echevarria confirmed this, stating, "Yet after more than two decades of controversy, the meaning of center of gravity remains unsettled. Fortunately some of the confusion can be eliminated by returning to its original [Clausewitz] sense."<sup>3</sup> The traditionalist argument is that flawed English translations corrupted the original concept and doctrine accepted this corruption, fueling the

debate. Echevarria's *Naval War College Review* article, "Clausewitz's Center of Gravity: It's Not What We Thought," discusses this mistranslation argument. The solution, according to the author, is "to align the definitions of center of gravity with the Clausewitzian concept and bring it back under control."<sup>4</sup> The cornerstone of the traditionalist argument is that what Clausewitz said trumps real world utility.

The rejectionists, represented by Alex Ryan of the Army's School of Advanced Military Studies and Colonel Mark Cancian, USMC, also studied the concept of the doctrine's discussion and the real world. What they learned and saw caused them to throw up their hands in frustration. This led Ryan to conclude the COG concept is "so abstract to be meaningless."<sup>5</sup> The title of Cancian's award-winning article in U.S.

Naval Institute *Proceedings*, September 1998, "Centers of Gravity Are a Myth," pretty well summed up the rejectionist argument. The rejectionists do not care what Clausewitz said or meant almost 200 years ago; they are practitioners looking for concepts and tools that will help address the challenges they face in a complex 21<sup>st</sup>-century environment. They perhaps have the strongest argument in searching for a solid analytical tool that has real utility, but they only see unsettled theory, so they reject it.

Then there are the accommodators represented by Joe Strange, formerly of the U.S. Marine Corps War College, Milan Vego of the U.S. Naval War College, and me of the U.S. Army Command and General Staff College. Accommodators take a practitioner's view, much like the rejectionists, but are less concerned than traditionalists with

what Clausewitz meant and are more concerned with how planners use the concept. The accommodators, however, reject the rejectionist viewpoint and see value in the concept, thus their quixotic quest to fix the concept. So JP 5-0's revision is the "giant," or, if one prefers, the "windmill" that the accommodators' lances are aimed at. On the tip of the lance is a new definition.

## Definitions

The definition is key. Echevarria and I have both proposed new definitions, Echevarria's in *Joint Force Quarterly* 35 (4<sup>th</sup> Quarter 2004) and my definition in *JFQ* 59 (4<sup>th</sup> Quarter 2010). Echevarria still relies on Clausewitz, but not the source or hub of power definition. My definition is divorced from Clausewitz and uses the doctrinal intent of the COG tool as the primary source. I suspect the rejectionists will refuse Echevarria's for the same reason they reject the current definition—"so abstract to be meaningless." My intent is to win over the rejectionists by providing a definition that is not abstract and has real-world utility.

Echevarria's definition places the emphasis not on strength but on cohesion, and replaces the COG metaphor with "centripetal force" that holds the force together. He defines COG as focal points that serve to hold a system or structure together and that draw power from a variety of sources, providing the system with purpose and direction.<sup>6</sup> Note that this definition has three elements: it holds a system together, draws power, and provides purpose and direction. One must assume that a COG candidate must possess all three elements.

Echevarria also states that "planners should refrain from applying the concept to every kind of war or operation."<sup>7</sup> He freely admits that his concept is best suited for war seeking the complete defeat of an enemy and has less utility in limited wars. Organizational structure in the sense of connectedness and cohesion is another factor. The greater the degree of decentralization or networking, the less utility the concept has. Echevarria's definition has so many caveats, and is so

narrowly confined to one type of war, that it is ill-suited for the current range of military operations. Again, the rejectionists would have a field day with this definition, arguing it is "meaningless."

Using his definition, Echevarria lays out a three-step process for COG identification:

- Step 1: Determine whether identifying and attacking a COG is appropriate for the type of war (total defeat or limited) that one is going to wage. He suggests reduced utility in limited wars.
- Step 2: Determine whether the adversary's whole structure or system is sufficiently connected to be treated as a single body (concentrated or dispersed). If dispersed or networked, the concept has less utility.
- Step 3: Determine what element has the necessary centripetal force to hold the system together.

The concept is no longer a source of power, as we currently understand it, but rather something that draws power from the system.<sup>8</sup> *This is a 180-degree flip in the concept's definition.* A concept that is so flexible lends credence to the rejectionist argument that it is so abstract to be meaningless. It would even send a devout accommodator such as myself running to the rejectionist camp.

I will concede to Echevarria that this proposed definition may be closer to what Clausewitz really meant. However, that does not matter. *On War* is not divine revelation. What matters is passing the "Cancian Test": does it work and have utility in the real world? What we need in JP 5-0 is a definition that meets the Cancian Test. In the remainder of this article, I propose and explain just such a definition. My proposal modernizes the COG concept, thus making it relevant for 21<sup>st</sup>-century conflict while meeting the doctrinal intent of providing a powerful analytical planning tool. The proposal is a new set of definitions that draws on systems theory rather than Clausewitz. This modernization, if adopted, would finally make COG the useful analytical tool that doctrine envisioned it to be.

## Redefining the Center of Gravity

Joint doctrine is clear on the concept's purpose and utility. What doctrine needs is new definitions of the COG and its critical factors that end decades of debate that fuels the rejectionist argument. The criteria of clarity, logic, precision, and testability guide the proposed definitions. Additionally, the definitions should not only stand up to modern military theory but also be based on them. New definitions allow for improved COG identification and validation methods based on logic and objectivity, not metaphors or lists of characteristics. The modernized definition is as follows: The *center of gravity* is the primary entity that inherently possesses the critical capabilities to achieve the objective.<sup>9</sup>

**Clarity.** This definition is a simple declarative statement of what a COG is. It is the primary entity that achieves the objective. Unlike the joint definition, it is not a list of characteristics or descriptions separated by commas. The words used in the proposed definition have limited meaning, unlike the phrase "a source of power," which can have several meanings. Clarity is achieved, which then allows for logic.

**Logic.** This definition has two criteria that lead to a valid inference. First, COG is the primary entity, the key word being *primary*. Second, it has the capability to achieve the specified objective or purpose. The logic is  $A$  (*primary entity*) +  $B$  (*capability to achieve the objective*) = *COG*. Using these simple criteria, one can infer what is and what is not a COG.

Note that the capability must be directly linked to attaining the objective. This linkage provides purpose to action and supports doctrine that correctly states, "An objective is always linked to a COG."<sup>10</sup> The COG is the primary possessor of the capability that achieves the objective. It is not a source of power; it is the possessor and wielder of that power.

Three questions illustrate this logic: what is the objective, how can it be achieved (the required capability), and what has the capability to do it? The answer to the last question is the COG. This logic then excludes other contenders allowing for greater precision.



Army Rangers assigned to 2<sup>nd</sup> Battalion, 75<sup>th</sup> Ranger Regiment, prepare to provide suppressive fire for assault element advancing on its objective during task force training, January 23, 2014, at Fort Hunter Liggett, California (U.S. Army/Steven Hitchcock)

**Precision.** Clarity and logic provide precision. Use of the word *primary* excludes secondary, supporting, or extraneous elements. If something is secondary or supporting, even if essential, it is a requirement, not a COG. This distinction allows planners to focus on the COG and its relationships with other elements in the system. The COG is the primary doer; it has the inherent capability required to achieve the objective. If an entity does not have that capability, it is not a COG and the system needs to find or create a COG with the requisite capability.

**Testable.** The logic in the definition provides for the supported and supporting validation test. The real COG is supported; it is the doer. Other candidates are supporting. The COG is inherently capable of achieving the purpose or objective and executes the primary action(s) that achieves it. It uses or consumes supporting resources to accomplish the objective. If something is

used or consumed to execute the primary action, it is a requirement. If it contributes to, but does not actually perform, the action, it serves a supporting function and is a requirement. It is not a COG.

In this definition, there are no “moral” COGs, only physical ones. Removing moral COGs contributes to clarity by reducing abstractness. Intangibles, such as moral strength, public opinion, or a righteous cause, are not COGs because they have no inherent capability for action. However, they are not without value and they can be requirements. A tangible physical agent must perform the action. This is an important distinction and highlights a key difference between my proposal, Echevarria’s, and current definitions.

The intent of the proposed definition is to limit COGs to tangible agents that have a physical existence. The reason is simple: we can more easily target things for defense or attack that physically exist. For example, an idea is intangible;

however, it resides in tangibles such as a mind, a book, or other type of physical media that is targetable. Morale resides in individuals and organizations; it does not exist in a targetable sense on its own. However, an individual or organization could be a target of attacks designed to affect morale. Here is another way of looking at this issue. Police do not target speeding, although they say they do, because speeding is intangible. They target speeders—people exceeding the speed limit. We may think we are promoting or attacking moral power, but in reality we are targeting individuals or organizations motivated by that moral power.

### Critical Factors

This brings us to critical factors, which can be targets for indirect attacks. They are critical capabilities, requirements, and vulnerabilities of a COG.<sup>11</sup> An intangible such as popular support is at best a critical requirement for some physical entity such as a government



or an army to perform some action that achieves a goal. However, like the COG definition, joint doctrine needs to revise the definitions of critical capabilities, critical requirements, and critical vulnerabilities associated with the COG concept.

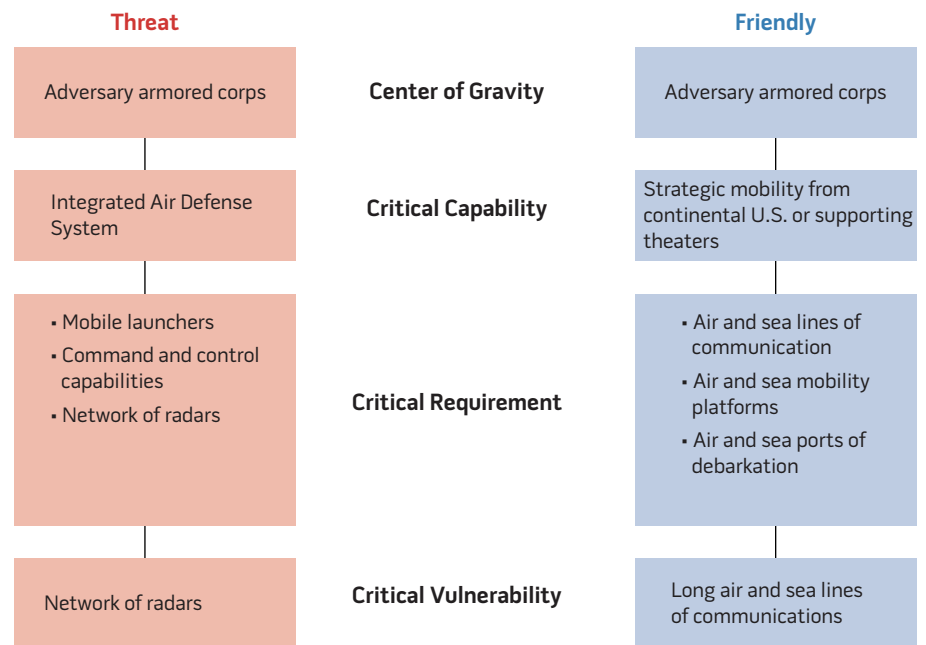
JP 5-0 states that planners should analyze COGs within a framework of three critical factors: critical capabilities, critical requirements, and critical vulnerabilities.<sup>12</sup> In 1996, Joe Strange created and defined the idea of critical factors:

- Critical capability: primary abilities that merit a COG to be identified as such in the context of a given scenario, situation, or mission
- Critical requirements: essential conditions, resources, and means for a critical capability to be fully operative
- Critical vulnerabilities: critical requirements or components thereof that are deficient or vulnerable to neutralization, interdiction, or attack in a manner achieving decisive results.<sup>13</sup>

These factors and their definitions were a tremendous step forward in COG analysis because they created a logical hierarchy that helped separate the true COG, the doer, from other contenders, which may only be requirements. Critical factors also linked systems theory to the COG concept. The COG was no longer a single mass or point; it was part of a system with connections to capabilities and requirements. Additionally, these factors provided planners insights on how to attack or defend a COG by showing what it does, what is needed, and what is vulnerable. However, for unknown reasons, joint doctrine significantly changed Strange's definition of critical capability. Two versions of the joint definition of critical capabilities, from JP 5-0 of August 2011, are as follow:

- Critical capability: a means that is considered a crucial enabler for a COG to function as such, and is essential to the accomplishment of the specified or assumed objective(s).
- Critical capabilities are those that are considered crucial enablers for

**Figure 1. Center of Gravity Analysis Example**



a COG to function as such, and are essential to the accomplishment of the adversary's assumed objective.<sup>14</sup>

In his definition Strange refers to *abilities*, which are verbs. The first joint definition refers to *means* and *enablers*, which can be verbs or nouns. The second definition replaces *means* with *those*, which refers back to capabilities that are generally expressed as verbs. This ambiguity between abilities or things confuses rather than clarifies. If one believes that means and enablers are things (nouns), then the first joint definition could be synonymous with Strange's definition of critical requirements. One solution is to accept Strange's wording for critical capability, emphasizing *primary abilities*, which cannot be confused with nouns and returns the focus to actions that accomplish the objective. However, an advantage of the joint definition is the phrase "essential to the accomplishment of the adversary's assumed objective." This clearly links the COG's purpose and capability to achieving the objective and supports the proposed definition.

If we combine elements from the Strange and joint definitions, clarity and logic can replace ambiguity and

confusion. The proposed definition of *critical capabilities* is primary abilities essential to the accomplishment of the objective that merits a COG to be identified as such. This revised definition of critical capabilities reinforces the idea that the COG is the primary agent or doer that possesses the ability to achieve the objective. It also links the critical capabilities to a purpose—achieving the objective. This contributes to logic and precision.

Both the Strange and joint definitions of critical requirements—"essential conditions, resources and means for a critical capability to be fully operative"—are acceptable.<sup>15</sup> However, we could improve them by shifting the focus to the COG rather than the capability. Both definitions link critical requirements to *capabilities*, which are verbs. Since the COG possesses the critical capability, it is clearer to link the requirement to the COG. For example, the capability of running does not require shoes, but a runner does require shoes. The question should be what does the COG (the runner) require (shoes) to perform the critical capability (running), not what does the capability (running) require. This may seem like a small point, but it keeps the focus on the tangible



Soldiers load AH-64 Apache with 2.75-inch rockets during Forward Arming and Refueling Point exercise near Camp Buehring, Kuwait, January 15, 2014 (NY Army National Guard/Harley Jelis)

agent, the COG, which is targetable and the focus of planning efforts. The proposed definition of *critical requirements* is essential conditions, resources, and the means that the COG requires to perform the critical capability.

Flawed definitions of the COG and critical factors result in flawed COG identification and analysis. Figure 1 (from JP 5-0, figure III-12) illustrates poor reasoning and flawed analysis that results from the current doctrinal definitions of COG and critical capabilities. No adversary objective or endstate is given in the figure, so we have to assume that the identification of the “adversary armored corps” as the COG is correct. The critical capability, “integrated air defense system,” is not a capability at all; it is a thing that is perhaps a requirement. Providing air defense is a capability. Since we do not know the mission of the armored corps, there is no way of knowing if air

defense is a capability critical to achieving the objective. The critical requirements listed are requirements of an air defense system, not the COG. The radars may be vulnerable, but the relationship to the COG is not clear, so their relevancy to the COG is unknown. The example contains no logic because the *definitions* lack logic. The result is an illustration in a doctrinal publication that contributes nothing positive and reinforces poor reasoning. Figure 2 illustrates an improved COG analysis based on revised definitions.

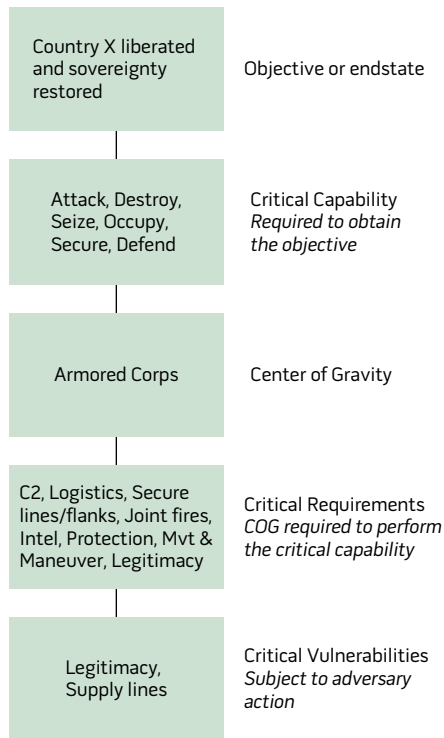
The proposed definitions resolve many of the valid criticisms from the rejectionists currently associated with the doctrinal definitions. Criticisms include:

- incompatibility with modern systems theory
- failure to account for dynamic environments
- imprecise metaphors

- COGs simply do not exist in the modern environment.

The proposal is not only compatible with systems theory, but it also relies on systems theory to provide understanding of the system itself. Since the proposed definition links the COG to objectives, capabilities, and available means, it allows for changing COGs in dynamic environments where ends, ways, and means constantly change. It does not rely on confusing and inaccurate metaphors that produce endless discussions on what is a source of power or a hub. Lastly, in the revised definition, the COG is a tangible and targetable agent that performs an action and can be shown to exist. These characteristics are the new foundation for a modernized center of gravity concept. Fixing the definitions of the center of gravity, critical capabilities, and critical requirements is the first step toward achieving the intent of JP 5-0.

**Figure 2. Revised Center of Gravity Analysis**



The current revision of JP 5-0 is an opportunity to end decades of debate and finally achieve the original intent of the COG's inclusion of doctrine. We have a choice: accept the proposal and settle the debate, or pass on this opportunity and continue the debate for several more years. JFQ

**Notes**

<sup>1</sup> Joint Publication (JP) 5-0, *Joint Operation Planning* (Washington, DC: The Joint Staff, August 11, 2011), III-23.

<sup>2</sup> Field Manual (FM) 100-5, *Operations* (Washington, DC: Headquarters Department of the Army, 1986), 179; JP 1-02, *Department of Defense Dictionary of Military and Associated Terms* (Washington, DC: The Joint Staff, March 23, 1994), 63.

<sup>3</sup> Antulio Echevarria II, "Center of Gravity Recommendations for Joint Doctrine," *Joint Force Quarterly* 35 (4<sup>th</sup> Quarter 2004), 10.

<sup>4</sup> *Ibid.*, 12.

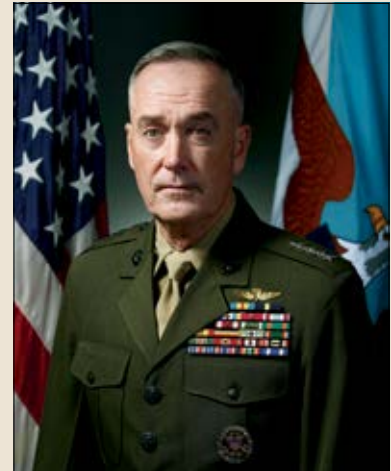
<sup>5</sup> Alex Ryan, email to Celestino Perez, Fort Leavenworth, KS, passed to author, October 13, 2011.

<sup>6</sup> Echevarria.

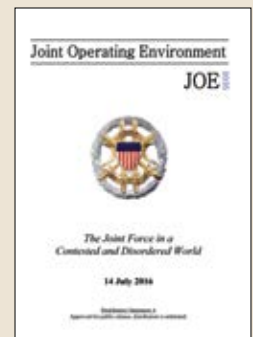
<sup>7</sup> *Ibid.*

**Release of New Joint Document**

In his remarks to a recent graduating class at the National Defense University, General Dunford declared that "not adapting to the change of the character of war, and not thinking out to the future in an innovative way . . . is the difference between us having a competitive advantage in the future, and not having a competitive advantage." In response to General Dunford's call to action, the Joint Staff J7 recently published the *Joint Operating Environment 2035: The Joint Force in a Contested and Disordered World*.



JOE 2035 was specifically designed to investigate the changing character of war and identify the implications of war's evolving character for the joint force. It strikes a delicate balance between a *credible description* of key trends that will redefine the future security environment and the *innovative reimagining* of how combinations of these trends might influence and shape the future of conflict and war. It concludes by describing a range of evolving missions that the future joint force might be required to conduct in response to the changing character of war.



JOE 2035 does not attempt to predict the future or forecast specific scenarios. However, consistent with General Dunford's mandate to study the future demands of war, it emphasizes that "thinking through the most important conditions in a changing world can mean the difference between victory and defeat, success and failure." Ultimately, JOE 2035 should encourage the purposeful preparation of the joint force so that it can effectively protect the United States and its interests, allies, and partners around the world.

<sup>8</sup> Echevarria.

<sup>9</sup> The use of the word *primary* is attributed to Joe Strange. See Joe Strange, *Centers of Gravity & Critical Vulnerabilities*, Perspectives on Warfighting Number Four, 2<sup>nd</sup> ed. (Quantico, VA: Marine Corps University, 1996), ix.

<sup>10</sup> JP 5-0, III-22.

<sup>11</sup> *Ibid.*, III-24.

<sup>12</sup> *Ibid.*

<sup>13</sup> Strange, ix.

<sup>14</sup> JP 5-0, GL-8, IV-12.

<sup>15</sup> Strange, ix; JP 5-0, GL-8, III-24.



## New from NDU Press

for the Center for Strategic Research

Strategic Forum 292

*Supporting Democracy in  
Turkey: The Role of Think Tanks*

by Richard H.M. Outzen and Ryan  
Schwing



Fifteen years into the era of President Recep Tayyip Erdogan, U.S. influence on his inner circle and support base, the new generation of Turkish strategic thinkers,

and the Turkish public at large has diminished rather than improved. U.S. interests would be better served by avoiding confrontation and maintaining close military-to-military cooperation while also pressing for democratization in a patient, low-profile manner. The emerging Turkish think tank sector offers opportunities for doing just that. The sector has grown dramatically over the past 20 years and offers a window for better understanding the revolution in Turkish strategic thinking that now perplexes many American observers. Engaging Turkey's think tanks would support democratization.



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JP 2-03, *Geospatial Intelligence in Joint Operations*

JP 3-01, *Countering Air and Missile Threats*

JP 3-13.4, *Military Deception*

JP 3-15.1, *Counter-Improvised Explosive Device Operations*

JP 3-18, *Joint Forcible Entry Operations*

JP 3-33, *Joint Task Force Headquarters*

JP 3-59, *Meteorological and Oceanographic Operations*

JP 4-01, *Defense Transportation System*

JP 4-06, *Mortuary Affairs*

JP 4-08, *Logistic Support of Multinational Operations*

JP 5-0, *Joint Planning*

### JPs Revised (signed within last 6 months)

JP 1-0, *Joint Personnel Support*

JP 1-04, *Legal Support to Military Operations*

JP 2-01.2, *Counterintelligence/Human Intelligence*

JP 3-0, *Joint Operations*

JP 3-03, *Joint Interdiction*

JP 3-04, *Joint Shipboard Helicopter and Tiltrotor Operations*

JP 3-07, *Stability*

JP 3-08, *Interorganizational Cooperation*

JP 3-14, *Space Operations*

JP 3-15, *Barriers, Obstacles, and Mine Warfare*

JP 3-20, *Security Cooperation*

JP 3-25, *Countering Threat Networks*

JP 3-41, *CBRN Consequence Management*

JP 3-42, *Joint Explosive Ordnance Disposal*

JP 4-01.6, *Joint Logistics Over-the-Shore*

# LESSONS ENCOUNTERED

LEARNING FROM THE LONG WAR

*Edited by Richard D. Hooker, Jr., and Joseph J. Collins*

## From NDU Press

**Lessons Encountered:**

**Learning from the Long War**

NDU Press, 2015 • 488 pp.

This volume began as two questions from General Martin E. Dempsey, 18<sup>th</sup> Chairman of the Joint Chiefs of Staff: What were the costs and benefits of the campaigns in Iraq and Afghanistan, and what were the strategic lessons of these campaigns? The Institute for National Strategic Studies at the National Defense University was tasked to answer these questions. The editors composed a volume that assesses the war and analyzes the costs, using the Institute's considerable in-house talent and the dedication of the NDU Press team. The audience for this volume is senior officers, their staffs, and the students in joint professional military education courses—the future leaders of the Armed Forces. Other national security professionals should find it of great value as well.

The volume begins with an introduction that addresses the difficulty of learning strategic lessons and a preview of the major lessons identified in the study. It then moves on to an analysis of the campaigns in Afghanistan and Iraq from their initiation to the onset of the U.S. Surges. The study then turns to the Surges themselves as tests of assessment and adaptation. The next part focuses on decision-making, implementation, and unity of effort. The volume then turns to the all-important issue of raising and mentoring indigenous

security forces, the basis for the U.S. exit strategy in both campaigns. Capping the study is a chapter on legal issues that range from detention to the use of unmanned aerial vehicles. The final chapter analyzes costs and benefits, dissects decisionmaking in both campaigns, and summarizes the lessons encountered. Supporting the volume are three annexes: one on the human and financial costs of the Long War and two detailed timelines for histories of Afghanistan and Iraq and the U.S. campaigns in those countries.

The lessons encountered in Afghanistan and Iraq at the strategic level inform our understanding of national security decisionmaking, intelligence, the character of contemporary conflict, and unity of effort and command. They stand alongside the lessons of other wars and remind future senior officers that those who fail to learn from past mistakes are bound to repeat them.

Available at [ndupress.ndu.edu/Books/LessonsEncountered.aspx](http://ndupress.ndu.edu/Books/LessonsEncountered.aspx)

## Women on the Frontlines of Peace and Security

Foreword by Hillary Rodham Clinton and Leon Panetta

NDU Press, 2015 • 218 pp.

This book reflects President Barack Obama's commitment to advancing women's participation in preventing conflict and keeping peace. It is inspired by the countless women and girls on the frontlines who make a difference every day in their communities and societies by creating opportunities and building peace.

Around the globe, policymakers and activists are working to empower women as agents of peace and to help address the challenges they face as survivors of conflict. When women are involved in peace negotiations, they raise important issues that might be otherwise overlooked. When women are educated and enabled to participate in every aspect of their societies—from growing the economy to strengthening the security sector—communities are more stable and less prone to conflict.

Our understanding of the importance of women in building and keeping peace is informed by a wide range of experts, from diplomats to military officials and from human rights activists to development professionals. The goal of this book is to bring together these diverse voices. As leaders in every region of the world recognize, no country can reach its full potential without the participation of all its citizens. This book seeks to add to the chorus of voices working to ensure that women and girls take their rightful place in building a stronger, safer, more prosperous world.

Available at [ndupress.ndu.edu/Books/WomenontheFrontlinesofPeaceandSecurity.aspx](http://ndupress.ndu.edu/Books/WomenontheFrontlinesofPeaceandSecurity.aspx)



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