The background of the cover is a painting of a large, multi-masted wooden sailing ship, possibly a galleon or a similar vessel, navigating through a turbulent sea. The ship is seen from a perspective that suggests the viewer is on the deck of another vessel, looking towards the first ship. The sea is dark and choppy, with white foam from the waves. The sky is a deep, textured blue. The overall style is that of a classical or maritime painting.

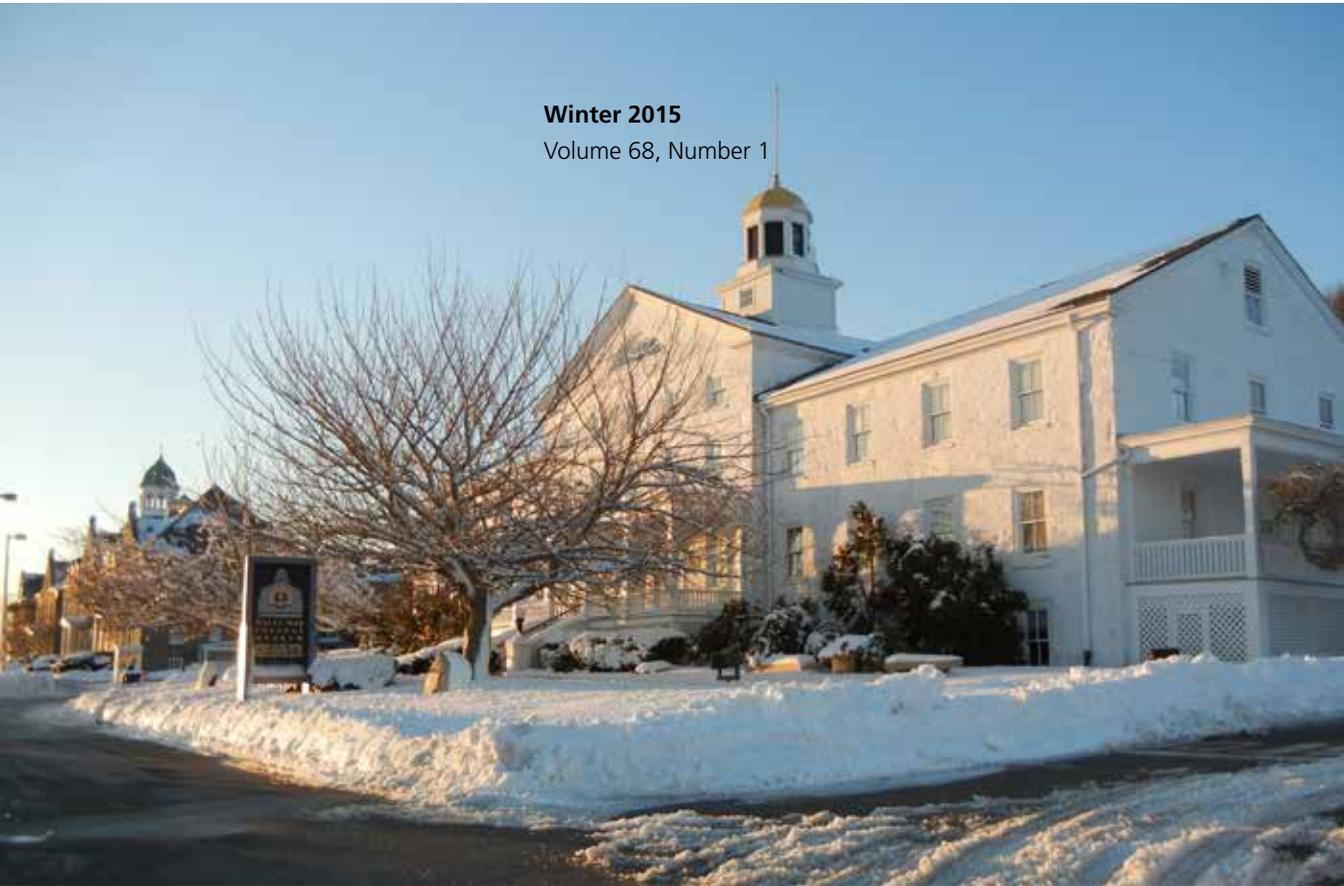
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Editor, Circulation, or Business
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FROM THE EDITORS

There are many features unique to submarines among modern naval platforms that have long made them attractive to navies around the world. This is especially true today, given the increasing threat to surface naval vessels of all kinds posed by advanced intelligence, surveillance, reconnaissance, and precision-strike capabilities. As Jan Joel Andersson demonstrates in “The Race to the Bottom: Submarine Proliferation and International Security,” there are today some four hundred submarines in the navies of forty nations, and both of these numbers are on the rise. Because attack submarines are weapons of choice for weaker states, this trend is especially pronounced among second- or third-tier navies. What are the broader implications of such a development? While plausibly contributing to greater stability at the strategic level, for example, does it create a dangerous instability at the tactical level? In fact, Andersson argues, the impact of submarine proliferation is easily exaggerated, and numbers alone can be highly misleading. Daunting maintenance problems, burdensome training requirements, and crew recruitment and retention issues can be expected to remain serious impediments to actual operational capability in many small submarine fleets, and even larger ones, such as India’s or Australia’s, given submarines’ technical complexity and the unforgiving undersea environment. Jan Joel Andersson is currently a senior analyst at the European Union Institute for Security Studies in Paris.

In “Deconstructing Nimitz’s Principle of Calculated Risk: Lessons for Today,” Robert C. Rubel argues that the U.S. Navy would be well served by recapturing an understanding of the principle of “calculated risk” famously formulated by Admiral Chester Nimitz in a message to his fleet commanders on the eve of the battle of Midway. Although concluding—surprisingly—that the principle was for all practical purposes essentially ignored by Admirals Fletcher and Spruance (and evidently by the Japanese fleet commander as well), Rubel argues that at a time when the Navy no longer has assured control of the western Pacific, given the rapid rise of Chinese antiaccess and area-denial capabilities, it needs to think carefully about the level of risk it can accept to its high-value capital ships (its aircraft carriers) relative to the strategic gains at stake in any conflict with that nation. Robert C. Rubel is the former dean of the Center for Naval Warfare Studies at the Naval War College.

The rise of Chinese naval power, and in particular the apparent Chinese determination to project that power into the Indian Ocean and beyond, continues

to offer circumstances favorable to the development of U.S.-Indian relations in the maritime domain and more broadly. In “The American ‘Pivot’ and the Indian Navy: It’s Hedging All the Way,” Harsh V. Pant and Yogesh Joshi review the current state of Indian thinking about that country’s naval role in the Indian Ocean and, prospectively, the western Pacific, where it has already stepped up maritime security cooperation with American friends and such allies as Australia and Japan. In spite of the logic of a closer U.S.-Indian relationship, however, they argue, India’s political leaders remain wary of too close an American connection. They trace this attitude to the mixed signals emanating from Washington in the first several years of the current administration about the degree of American commitment to the region and to, in particular, containment of a rising China. They conclude, however, that there are steps the United States could take to advance a relationship that is clearly of great potential advantage to both sides. Harsh V. Pant is professor of international relations at King’s College London; Yogesh Joshi is currently a fellow in the Defence Studies Department, also at King’s College.

Two articles address, from different perspectives, the continuing menace of piracy. In “China’s Blue Soft Power: Antipiracy, Engagement, and Image Enhancement,” Andrew S. Erickson and Austin M. Strange review the history of Chinese antipiracy efforts in the Gulf of Aden, with particular attention to their growing role in Chinese naval diplomacy and “soft power” projection generally. They argue that these operations have been a watershed in China’s emergence as a fully “blue-water-capable” sea power as well as a demonstration of China’s interest in being seen as a cooperative player in the global maritime arena—in stark contrast to the poor image it continues to generate by its unilateral actions in the seas closer to home. Ali Kamal-Deen, in “The Anatomy of Gulf of Guinea Piracy,” reminds us that Africa’s pirate problem is no longer confined to Somalia. Indeed, the threat to coastal and international shipping and infrastructure (i.e., oil platforms) in the Gulf of Guinea has gained in intensity over the last five years even as Somali piracy has been much reduced. This comprehensive review of recent piracy trends in the Gulf of Guinea broadly speaking concludes with a series of recommendations for countering this (very underreported) threat. Ali Kamal-Deen is a commander in the Ghana Navy and its Legal Director.

WINNERS OF OUR ANNUAL PRIZES

The President of the Naval War College has awarded prizes to the winners of the annual Hugh G. Nott and Edward S. Miller competitions for articles appearing in the *Naval War College Review*.

The Nott Prize, established in the early 1980s, is given to the authors of the best articles (less those considered for the Miller Prize) in the *Review* in the previous

publishing year. Cash awards are provided by the generosity of the Naval War College Foundation.

The winning article is “Smart Defense: Brave New Approach or Déjà Vu?” by Paul Johnson, Tim LaBenz, and Darrell Driver, which appeared in our Summer 2013 issue (\$1,000, shared among coauthors).

Three articles won honorable mention: “The Gaza Flotilla Incident and the Modern Law of Blockade,” by James Farrant (Summer 2013); “The Senkaku/Diaoyu Island Controversy: A Crisis Postponed,” by Paul J. Smith (Spring 2013); and “Globalization, Security, and Economic Well-Being,” by Stephen M. Carmel (Winter 2013).

The Miller Prize was founded in 1992 by the historian Edward S. Miller for the author of the best historical article appearing in the *Naval War College Review* in the same period. The winner is Thomas C. Hone, “Replacing Battleships with Aircraft Carriers in the Pacific in World War II,” appearing in our Winter 2013 issue (\$500).

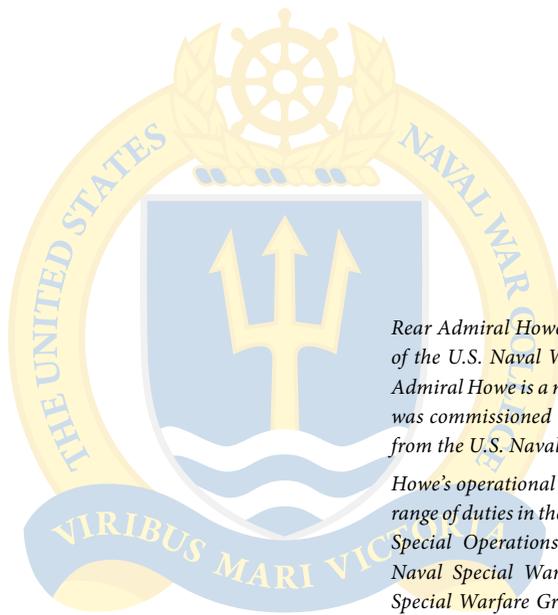
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Pelham G. Boyer, Managing Editor



Rear Admiral Howe became the fifty-fifth President of the U.S. Naval War College on 8 July 2014. Rear Admiral Howe is a native of Jacksonville, Florida. He was commissioned in 1984 following his graduation from the U.S. Naval Academy.

Howe's operational assignments have included a full range of duties in the Naval Special Warfare and joint Special Operations communities. He commanded Naval Special Warfare Unit 3 in Bahrain, Naval Special Warfare Group 3 in San Diego, and Special Operations Command, Pacific in Hawaii. His service overseas includes multiple deployments to the western Pacific and Southwest Asia and participation in Operations EARNEST WILL, PROVIDE PROMISE, ENDURING FREEDOM, and IRAQI FREEDOM.

His key joint and staff assignments include current operations officer at Special Operations Command, Pacific; Chief Staff Officer, Naval Special Warfare Development Group; Assistant Chief of Staff for Operations, Plans and Policy at Naval Special Warfare Command; Director of Legislative Affairs for U.S. Special Operations Command; and Assistant Commanding Officer, Joint Special Operations Command.

Howe graduated from the Naval Postgraduate School in 1995 with a master of arts in national security affairs (special operations / low-intensity conflict), and from the National War College in 2002 with a master of arts in national security.

PRESIDENT'S FORUM



The Twenty-First International Seapower Symposium

THE NAVAL WAR COLLEGE recently hosted, on behalf of the Secretary of the Navy and the Chief of Naval Operations (CNO), one of the most important events conducted on our campus in more than three years. The Navy, Marine Corps, and Coast Guard “Cooperative Strategy for 21st Century Seapower” challenged the nation’s maritime services to help “foster and sustain cooperative relationships with more international partners.” A major step toward meeting this challenge took place in September 2014, when the College hosted the Twenty-First International Seapower Symposium (ISS). The theme this year was “Global Solutions to Common Maritime Challenges.”

First held in Newport in 1969, the biennial ISS offers a unique opportunity for the world’s maritime leaders to discuss and promote international maritime security cooperation. These discussions offer opportunities for future voluntary regional and international collaboration in searching for solutions to challenges facing the global network of maritime nations. Through these symposia, the CNO seeks individual inputs and proposals for enhancing regional and global maritime security. ISS is indeed unique, as it is the only forum in the world that brings together the heads of so many navies at the same time to enhance maritime security and collaborative operations. Discussions at ISS have resulted in many successful efforts to enhance cooperation in countering piracy, providing disaster relief and humanitarian assistance, coordinating search and rescue at sea (including submarine rescue), and planning and conducting coalition military operations and joint law enforcement to counter arms, drug, and human trafficking, as well as fishery and pollution violations.

At the 2014 symposium, 217 naval leaders representing 110 countries came together to discuss issues of common concern in the maritime environment. Within this distinguished group were eighty-six Naval War College alumni and thirty-two U.S. Navy flag officers. Among the heads of navy in attendance was Admiral Wu Shengli, the first delegate from the People's Liberation Army Navy to attend ISS.

In plenary sessions, the delegates heard from Secretary of the Navy Ray Mabus; Chief of Naval Operations Admiral Jonathan Greenert; Pulitzer Prize-winning global energy expert Dr. Daniel Yergin; Hoover Institution Distinguished Visiting Fellow General James Mattis, USMC (Ret.); and nationally recognized climatologist Rear Admiral David Titley, USN (Ret.). To encourage face-to-face discussion of issues with geographical focus, regional breakout groups were formed for the areas of the

- Atlantic Ocean
- Caribbean Sea
- Gulf of Guinea
- Indian Ocean / Gulf of Aden / Arabian Sea / Red Sea
- Norwegian Sea / North Sea / Baltic Sea
- Mediterranean / Black Sea / Caspian Sea
- Pacific Ocean.

In each breakout group, the discussion focused on issues such as

- Future Trends in Maritime Security
- Enhancing Coalition Operations
- Regional Maritime Agreements
- Lessons learned during the search for Malaysian Airlines Flight MH-370.

The discussions held over the three-day symposium helped establish the foundation for a more stable global maritime environment for many years to come.

In his remarks, Secretary Mabus said,

The truth is sailors of all nations have much in common with other sailors. The chief of one of our partner navies in Asia who is here today once offered me his view of the difference between soldiers and sailors. Soldiers, he said, by necessity focus on boundaries and obstacles, man-made or natural. They are constantly looking down at the ground. Sailors, on the other hand, head out to sea and see no boundaries, no obstacles. They look out and they see nothing but the horizon, nothing but possibilities.

The formal ISS XXI proceedings will be published in the spring and will be available on the Naval War College website, www.usnwc.edu/.

The Naval War College is fortunate to have Admiral Guillermo E. Barrera, Colombian Navy (Ret.), on its faculty as a CNO Distinguished International Fellow. He is in the unique position of having attended ISS events at the Naval War College since 2007. His reflections on the value of the ISS series included the following:

During ISS XXI, I felt that the assembled CNOs were much closer to one another than they were at ISS XVIII in 2007, both as human beings and as friends. I think this is one of the reasons why they more fully understand that the challenges at sea are common for many countries, and therefore for their navies. Several of the visiting CNOs used phrases from the U.S. Navy, Marine Corps, and Coast Guard's "Cooperative Strategy for 21st Century Seapower" (which had been announced at ISS XVIII) in their presentations. Many of them subscribed to the notion that "trust cannot be surged." Virtually every speaker referred to the need for enhanced cooperation. The CNO of China's People's Liberation Army Navy publicly supported the concept of cooperation and suggested the universal application of the Code for Unplanned Encounters at Sea (CUES),* which was an outgrowth of the Western Pacific Naval Symposium held in Qingdao, China, in 2014. It was great to hear how the afternoon panel on the first day set the example of familiarity and friendship that followed until Friday. Many close friendships were started or strengthened during those three days. One very important aspect is that ISS provides a great framework for a number of bilateral and multilateral meetings that helped the assembled CNOs to grow in cooperation and friendship. Many of these meetings and reunions could never happen outside of ISS. Looking to the future, I believe that there must be a continuous effort to connect this year's event with the next ISS in 2016, in order for ISS to have a truly positive impact on the navies of the world.

I echo Admiral Barrera's thoughts and believe that the ISS series is one of the single most influential factors in increasing maritime trust and cooperation around the globe.

Secretary Mabus very succinctly summarized the mission that all in attendance shared: "All of you here today are sailors and marines; you are focused on the horizon, on possibilities, on future opportunities. All of us in this room face a similar job. We have the task of explaining to our governments and our citizens

* CUES is a nonbinding, voluntary agreement to follow certain set procedures for communicating with other military forces encountered at sea or in the air. It covers what steps should be taken to reduce interference and uncertainty during unexpected contact between naval vessels or aircraft. Communication methods include the firing of different-colored flares and the use of signal flags, as well as using a list of English-language terms.

why our navies matter. We have to make sure they understand how important the maritime world is to our success economically and to our security. We have to encourage them to look outward, across the sea to that far horizon.”

I salute the combined Naval War College / CNO Staff team for the years of planning and organization that ensured success in this important endeavor.

P. GARDNER HOWE III

Rear Admiral, U.S. Navy

President, Naval War College

Dr. Andersson is Senior Analyst at the European Union Institute of Security Studies in Paris. This article was written while he was Dragas Distinguished Visiting Professor in the Graduate Program of International Studies at Old Dominion University, in Norfolk, Virginia, on leave from the Swedish Institute of International Affairs, in Stockholm. Dr. Andersson received his PhD in political science from the University of California, Berkeley, and has taught at Berkeley and the Universities of Stockholm and Uppsala in Sweden, as well as at the Swedish National Defense College.

THE RACE TO THE BOTTOM

Submarine Proliferation and International Security

Jan Joel Andersson

The growing need to protect global shipping routes and the intensification of maritime territorial conflicts have led to a naval arms buildup around the world.¹ Perhaps the most-cited example of this new focus on naval power is the increasing number of countries building or planning new aircraft carriers, but many analysts are more concerned about the proliferation of modern attack submarines.² Often considered the ultimate weapon of naval warfare, submarines are versatile platforms able to attack surface ships, conduct antisubmarine warfare (ASW), deploy mines, and, as they are increasingly equipped with missiles, attack land targets.³ In addition, submarines are also highly capable intelligence-gathering platforms, able to monitor ship movements over vast distances, cut undersea communications cables, and insert reconnaissance teams covertly on hostile shores.⁴ Since submarines can operate without prior sea and air control, they allow a weaker actor means to attack a stronger one. Submarines also create uncertainty for an opponent, since the presence of an enemy submarine is difficult to confirm until an attack takes place. Countering a hostile submarine force is not only difficult but also very time consuming.⁵ Given such strong offensive capabilities, submarines are viewed as especially detrimental to crisis stability.⁶

Nevertheless, despite the rapidly increasing number of countries buying submarines and counter to conventional wisdom, I argue that the threat to international security from the current submarine proliferation around the world may have been exaggerated. In reality, it is very difficult and costly to operate submarines safely and even more difficult to create and sustain a submarine force capable of conducting effective combat patrols. Furthermore, the strategic value of a submarine force in comparison with other defense assets in times of limited budgets is not always self-evident, and some longtime operators of submarines

have even abandoned them in favor of larger surface vessels.⁷ In this article I analyze the threat to international security from the global proliferation of submarines by focusing on the challenges of maintaining boats and training crews. The article consists of three main sections: the first maps the global proliferation of submarines; the second analyzes the threat from this proliferation in terms of having enough submarines in a fleet, maintaining them, and training and retaining enough personnel; and the third concludes.

THE GLOBAL PROLIFERATION OF SUBMARINES

Given submarines' versatility, many navies around the world are currently procuring or actively contemplating the acquisition of new ones.⁸ Although the total number of submarines in the world has fallen since the height of the Cold War, mainly due to the retirement of large numbers of old Soviet and Chinese boats, the current global submarine inventory stands at over four hundred submarines operated by some forty countries (see the table).⁹ Of these some 390 are attack submarines or nonstrategic guided-missile submarines. It is estimated that more than 150 new submarines will be built by 2021 and that up to three hundred could be launched in the next fifteen to twenty years.¹⁰ According to industry sources, the global submarine market was valued at U.S.\$14.4 billion in 2013 and is expected to grow to \$21.7 billion by 2023.¹¹ Such longtime submarine builders and operators as China, France, Germany, Japan, Russia, Sweden, the United Kingdom, and the United States are all renewing their current fleets.¹² The main export markets are, however, in the Middle East, Asia, and Latin America. In these regions, many existing submarines from the Soviet era, as well as early German export models, are reaching the ends of their operational lives and need to be replaced. In addition, several navies without previous experience with the type are ordering submarines.¹³ National security is a main reason driving the demand for submarines in some areas, particularly in Asia, but domestic industrial and technological development goals, as well as national prestige, are also important factors.¹⁴

The submarine world used to be controlled by the great powers and a handful of technologically advanced countries, such as Germany, Japan, the Netherlands, and Sweden. Today, in contrast, submarine operators can be found on every inhabited continent, including Africa.¹⁵ In the Middle East, the navies of Algeria, Egypt, Iran, and Israel have submarines, while Oman, Saudi Arabia, and the United Arab Emirates are contemplating acquisitions.¹⁶ In Latin America too, Argentina, Brazil, Chile, Colombia, Ecuador, Peru, and Venezuela all have submarines, and several of them are in the process of adding to their fleets. In South Asia, India and Pakistan have long operated submarines and deployed them in war, while Bangladesh and Burma (Myanmar) are planning to procure submarines

in the near future.¹⁷ In Northeast Asia, Japan and South Korea are adding new submarines to already impressive fleets to counter China's and North Korea's very large submarine forces. In Southeast Asia, Australia, Indonesia, Malaysia, Singapore, Taiwan, and Vietnam all have attack submarines, and many plan new acquisitions.¹⁸ In addition, the Philippines and Thailand recently announced that they too are seeking to obtain submarines.¹⁹ Given that many of these countries are parties to territorial disputes and close to some of the world's busiest shipping lanes and maritime choke points, it is not surprising that the proliferating number of submarines around the world has many observers concerned.²⁰

There are not only more submarine operators than ever, but many of the boats they operate are also more sophisticated than ever.²¹ India recently joined, China, France, Russia, the United Kingdom, and the United States in the nuclear-powered-submarine club.²² Brazil may soon join too, as it has plans to build a nuclear-powered submarine in the coming decade.²³ While it does not enable submarines to match the underwater endurance of nuclear-powered boats, the increasing availability of air-independent propulsion (AIP) allows conventionally powered submarines to remain submerged for weeks rather than days.²⁴ Submarine manufacturers in France, Germany, and Sweden all offer this technology to prospective buyers around the world.²⁵ China may soon be added to this list; it is rumored that it may sell AIP-equipped submarines to Pakistan, though no technical specifications have yet been confirmed.²⁶ Another advanced technology increasingly being offered to global submarine customers by France, Russia, and the United States is that of submarine-launched antiship cruise missiles. Among recent buyers of cruise missiles for submarines are China, Egypt, India, Israel, Malaysia, Pakistan, South Korea, Taiwan, and Vietnam.²⁷ These new technologies, in combination with more sophisticated sensors, combat systems, and torpedoes, make today's submarines more capable and versatile than ever.

ANALYZING THE SUBMARINE THREAT

Reflecting the proliferation of submarines, the literature on the global naval arms buildup is dominated by descriptive accounts of the latest submarines acquisitions and procurement plans of navies around the world. These accounts are important indicators of armament trends but primarily focus on technical specifications of boats and details of their weapons systems.²⁸ Counting submarines is easy. It is far more difficult to evaluate the capabilities of a submarine force; rising numbers alone do not necessarily equate to a rising threat. In fact, few serious attempts are made to evaluate actual status or combat capabilities of the many submarine operators around the world.²⁹ Even in the large literature on the Chinese submarine program, most studies focus on equipment and overall strategy, rather

Country	Region	SSBN	SSGN	SSN	SSG	SSK/SS
Canada	North America					4
United States	North America	14	4	53		
France	Europe	4		6		
Germany	Europe					4
Greece	Europe					8
Italy	Europe					6
Netherlands	Europe					4
Norway	Europe					6
Poland	Europe					5
Portugal	Europe					2
Spain	Europe					3
Sweden	Europe					5
Turkey	Europe					14
Ukraine	Europe					1
United Kingdom	Europe	4		7		
Russia	Russia	11	8	17		20
Australia	Asia					6
China	Asia	4		5	1	60
India	Asia			1		13
Indonesia	Asia					2
Japan	Asia					18
North Korea	Asia					20
South Korea	Asia					12
Malaysia	Asia					2
Pakistan	Asia					5
Singapore	Asia					6
Taiwan	Asia					4
Vietnam	Asia					2
Algeria	Middle East / North Africa					4
Egypt	Middle East / North Africa					4
Iran	Middle East / North Africa					3
Israel	Middle East / North Africa					3

Country	Region	SSBN	SSGN	SSN	SSG	SSK/SS
Libya	Middle East / North Africa					2
Argentina	Latin America / Caribbean					3
Brazil	Latin America / Caribbean					5
Chile	Latin America / Caribbean					4
Colombia	Latin America / Caribbean					4
Ecuador	Latin America / Caribbean					2
Peru	Latin America / Caribbean					6
Venezuela	Latin America / Caribbean					2
South Africa	Sub-Saharan Africa					3
Total		37	12	89	1	277
Grand Total: 416						

Sources: *The Military Balance* (London: International Institute of Strategic Studies, 2014); U.S. Navy, "Submarine Proliferation Resource Collection," *NTI*, 21 October 2013, www.nti.org/.

than analyzing capability in terms of readiness of boats and training of crews.³⁰ These omissions lead to problems in correct assessment of the threat from the growing submarine forces around the world.

To deploy a submarine force effectively requires not only boats but the technical skills necessary to service and maintain them and enough trained personnel to operate them. Moreover, an effective submarine force requires means to communicate with boats and ability to control them once they deploy. These requirements are hard to fulfill and are far more complex than their application to surface ships.³¹

Minimum Numbers

An effective submarine force requires some minimum number of submarines. Because of the heavy maintenance requirements of submarines, it is generally held that at least four are necessary to keep one or two continuously on station or available for deployment.³² A smaller fleet will not provide enough opportunities for crew training, regular patrol deployments, or maintenance to sustain a capability over time. However, many of the world's submarine forces are very small, over a quarter smaller than that threshold size. Of the forty-two current operators, thirteen (see table) have fewer than four submarines (not counting coastal or midget submarines): Argentina (three), Ecuador (two), Indonesia (two), Iran (three), Israel (three), Libya (two), Malaysia (two), Portugal (two), South Africa (three), Spain (three), Ukraine (one), Venezuela (two), and Vietnam (two). Moreover, the submarines in several of these small forces are very old, reaching

the ends of their safe service lives. Argentina, Colombia, Ecuador, Indonesia, and Venezuela all operate thirty-to-forty-year-old submarines that are increasingly “maintenance heavy” and limited in their ability to go to sea. In a small fleet, this fact even further restricts opportunities for necessary crew training and patrol deployments. Some of these countries have recently ordered new submarines but in most cases will only replace existing boats without significantly increasing numbers. Some other submarine forces have four or more submarines but only on paper; in reality, many of their submarines are very old and in extended or even indefinite maintenance, seriously impacting the training and deployment of the remaining units.

Maintenance and Logistics

Owing to their taxing underwater environment, submarines are particularly challenging to keep operational. This is especially the case in the tropics, where higher salinity and temperature of seawater increase corrosion on equipment that in many cases was designed for much colder and less corrosive northern climates.³³ Modern submarines are complex systems of systems, requiring substantial skills in not only regular ship maintenance but also the upkeep of advanced propulsion and technology employed in acoustics, electronics, and periscope optics.³⁴ The catastrophic consequences of mechanical or equipment failure underwater require particular attention to quality control and regular maintenance. By no means all countries are capable of fully servicing and refitting modern submarines; many operators are forced to hire foreign help or send their boats abroad for extended periods of time and at great cost. Any deferment of regular service and refits quickly renders boats unsafe for operations.³⁵

Maintaining and servicing complex systems like submarines require both technical expertise and suitable shipyards. The challenges of maintaining submarines with inadequate support organizations can be illustrated by the experience of the South African navy and its German Type 209 submarines, a minor local overhaul of one of which commenced in 2007. Inadequate infrastructure and technical understanding of onboard electrical systems reportedly kept the boat out of commission for more than five years.³⁶ In August 2012, it was reported, all three of South Africa’s submarines were in dry dock, the only operational vessel having crashed into the seabed.³⁷ The problems of maintenance also increase when there are many different types of boats in a fleet.³⁸ The complexity of servicing the Indian submarine fleet—comprising German Type 209, Russian Kilo, Russian nuclear-powered Akula II, indigenously designed nuclear-powered boats, and soon also French *Scorpène*—must be daunting, to say the least. In fact, a lack of adequate domestic repair facilities and difficulties in obtaining spare parts have forced India to send many of its submarines to Russia for lengthy refits over the years.³⁹

Even long-established, single-class submarine services can have great difficulties in maintaining their boats. The Royal Australian Navy (RAN) currently operates six Swedish-designed *Collins*-class submarines that were coproduced in Australia and commissioned between 1996 and 2003. These boats, among the largest and most advanced conventional submarines in the world, have suffered from persistent maintenance problems that have resulted in reduced availability and opportunities for crew training. The RAN's stated goal is to have always two submarines deployed or available for immediate deployment, two in training, and two in maintenance. However, this goal has reportedly never been achieved;

Counting submarines is easy. It is far more difficult to evaluate the capabilities of a submarine force; rising numbers alone do not necessarily equate to a rising threat.

the navy has at times been left with only one operational submarine, sometimes none at all.⁴⁰

Many of the problems of the *Collins*-class submarines

are not design related but stem from a failure by the RAN to make adequate maintenance and logistical arrangements when they entered service.⁴¹ This early lack of attention to maintenance and logistics and subsequent failure to adopt processes for reliability control led to maintenance backlogs that greatly reduced the number of available submarines for the RAN. Despite improvements, the Australian submarine force still has problems with availability, and RAN submarines have reportedly had to withdraw from three recent international exercise deployments, among them RIMPAC 2012, because of technical problems.⁴² The failure of the RAN to establish adequate and comprehensive maintenance procedures for its submarines shows that even experienced operators with access to domestic comprehensive shipbuilding industries may have trouble keeping their fleets at sea.

Another case in point is Canada, whose current fleet of four *Victoria*-class submarines, bought secondhand from the United Kingdom, has since the boats' commissioning between 2000 and 2004 suffered ongoing mechanical problems and accidents. The Royal Canadian Navy has never had more than two of these boats in operational condition, sometimes none.⁴³ Servicing the boats has proved not only far more complicated than expected but also far more costly.⁴⁴ According to defense experts, shortsighted management decisions in the procurement process, such as failing to acquire sufficient spare parts or establish supplier relationships beforehand, have led to repeated and significant delays in restoring submarines to operational status.⁴⁵ The Canadian submarine fleet is at this writing expected to reach a steady state for the first time in late 2014, whereby three of its four submarines will be available for operations at any one time, on a rolling schedule. It will have taken more than a decade to reach this point.⁴⁶ According

to the Canadian navy, the four *Victorias* together managed to spend only around 1,300 days at sea over the ten-year period 2003–13.⁴⁷

Maintaining submarines is costly. Any submarine force lacking funds for maintenance and training will struggle to maintain any useful level of readiness. To get Canada's submarine force fully operational, the nation's Treasury Board approved in 2008 the expenditure of up to Cdn.\$1.5 billion over as many as fifteen years for the in-service support for the *Victoria* class. After a competitive bidding, the *Victoria* In-Service Support Contract was awarded to the Canadian Submarine Management Group, currently known as Babcock Canada, Inc.⁴⁸ In June 2013 the Canadian government extended the submarine maintenance and support contract with Babcock Canada, valued at Cdn.\$531 million, for another five years.⁴⁹

Given that submarines are among the most complicated machines in existence, maintaining them is of central importance. Rigorous and regularly scheduled maintenance periods are essential. Failure to include the costs of submarine upkeep in defense budgets may therefore be an indication of a low level of attention to the issue. As a case in point, in 2011 the Malaysian Ministry of Defence was awarded an additional allocation of RM 493.3 million (\$167 million) to maintain its two recently bought *Scorpène* submarines, raising the total defense budget to RM 11 billion (\$3.77 billion). Apparently the defense ministry had not allocated any funds to maintain or administer the submarines in the original budget.⁵⁰ Moreover, owing to the lack of necessary local technical expertise to service them, the Malaysian navy's two *Scorpènes* are now maintained by the French company Boustead DCNS Naval Corporation. According to press reports, Boustead provides full logistics support to the Malaysian navy—spare parts, workshop equipment, yard facilities and equipment, submarine safety conditioning facilities, support, and maintenance. The company even provides tugboat services and operates and maintains ship lifts, and submarine umbilical services (shore electrical power and the like).⁵¹

Submarine operators that do not have the required expertise or the funds to buy it on commercial terms are left to improvise. Iran, for example, has three Russian Kilo-class submarines but cannot afford, or does not dare, to send them back to Russia for refurbishment and upgrade. Russia refuses to provide necessary technical information and spare parts, so Iran has undertaken upgrades at home. Forced to complete refurbishments and repairs to one of its Kilos on its own, Iran relaunched it in 2012 after seven years in refit. According to Iranian press releases, replacement parts and components (pumps, compressors, engines, sound-absorbent tiles, control surfaces, etc.) were locally produced and installed.⁵² Some were commonly available, but many others were not. It is unknown how adequate the Iranian replacement parts have proved, but the fact

that it took Iran seven years to refit one submarine indicates how challenging it is to keep modern submarines at sea.

Maintenance and repair needs increase with age, as do difficulties in obtaining spare parts. Many submarines around the world are over thirty years old, some over forty. Both Colombia and Venezuela, for example, have 1970s-era Type 209s.⁵³ Taiwan's two World War II-era Guppy-type submarines are even older and can be used only for training purposes.⁵⁴ Indonesia's two Type 209 boats, bought from Germany in 1981, have been repeatedly refitted, but they are not to be replaced until 2020, at which time they will be forty years old.⁵⁵ Given the work required to keep such old boats running in tropical climates, their sea time must be limited and their safety an issue. Some submarine operators simply have run out of money and seem to do little maintenance or none at all. The Argentine navy as a whole is reportedly in disrepair owing to the absence of funds for maintenance and training. According to media reports, all three of its submarines have defects and barely left port in 2012.⁵⁶ Given the poor maintenance performance of many countries, the operational status of many submarine forces must be seriously questioned.

Training and Deployment

Operation of a submarine is very different from the case with a surface vessel. A submarine without a properly trained crew cannot do much more than sail in and out of harbor. Training submarine crews, however, is especially difficult and time consuming. To become qualified, a submariner needs between one and two years of intensive training; fully mastering some high-technology systems, such as advanced sonar, takes even longer.⁵⁷ It can take at least six years of training to make a crew a cohesive unit able to operate at sea effectively.⁵⁸ A submarine captain requires, to reach the highest skill levels, between ten and fifteen years of training and deployment. A submarine's crew, to remain qualified and maintain its skills, needs regular deployments. While surface sailors and officers can practice many of their skills on any surface vessel, a submarine crew can train effectively only on a submarine. Although simulators are becoming increasingly powerful, many submarine-related skills cannot be learned or maintained except during actual deployments.⁵⁹ A lack of training boats and shore facilities quickly atrophies skills. In navies having only one, two, or a handful of submarines, the availability of boats on which to train directly bounds the possibility of achieving trained crews and effective deployments.

In the U.S. Navy, with a large submarine fleet and a high operational tempo, submarine crews gain experience and maintain skills from repeated and extended deployments. Other highly regarded submarine services are, for example, the British, Dutch, German, Japanese, and Swedish. Two common traits among these services are focus on maintenance and close relationships with original design

firms and building yards, as a result of which their boats can be used effectively for training and deployment. For these submarine services, a greater challenge is to recruit and retain enough personnel. The shortage of personnel means that, for example, British submarines regularly leave for deployments with less than full crews; that only three of the Dutch navy's four submarines can be fully manned; and that the Swedish navy would be able to send its five submarines to sea simultaneously only by drawing on submarine-qualified personnel assigned to central staff and shore duties.⁶⁰

In fact, many if not most submarine services around the world suffer from recruitment problems. South Korea and Taiwan both have difficulty recruiting and retaining submariners.⁶¹ The Australian navy is so short of submariners that it can find crews for only three or four of its six boats and actively seeks recruits from overseas.⁶² The South African navy needs about 150 submarine-qualified sailors to form full-time crews for its three boats, but over the last several years it has had enough sailors to operate only one. Moreover, owing to high operating expenses and a lack of funds, the ships and submarines of the South African navy spend a very limited amount of time at sea. On 17 July 2012 the South African submarine SAS *Queen Modjadji* collided with the ocean floor during an exercise because of what a member of parliament described as negligence and poor training.⁶³ Since the other two South African submarines were in long-term maintenance, the crash put the country's entire submarine fleet in dry dock simultaneously, effectively precluding training.⁶⁴ In Latin America, many submarines are in a poor state, resulting in little or no training for crews. According to one report, Argentina's submarine crews spent only nineteen total hours submerged in 2011.⁶⁵

All submarine services experience incidents and accidents, but with inexperienced crews minor incidents are more likely to have fatal consequences. A case in point is the Indian navy, where personnel shortages have plagued the submarine service since its inception in the 1960s. Rapid introduction in a short time of large numbers of submarines from different countries, while simultaneously setting up shore support facilities, made recruitment difficult.⁶⁶ Selection procedures had to be made less stringent, and pay was increased several times. According to naval historians in India, it was only in the 1990s that the Indian navy began to attract personnel of the desired caliber to submarines.⁶⁷ Even today, despite increases in pay, the Indian submarine service seems to suffer from training and maintenance problems.⁶⁸ In August 2013, explosions sank INS *Sindhurakshak* (a Russian-built Kilo) in Mumbai Harbor, killing its crew of eighteen; the cause, according to preliminary findings, was an accident with or mishandling of ammunition by inexperienced crew members in the weapons compartment.⁶⁹ Another possible explanation for the catastrophic explosion is,

according to Russian experts, a violation of safety standards and instructions by the crew during the recharging of the submarine's batteries.⁷⁰ The *Sindhurakshak* disaster and subsequent publicity in Indian media on the harsh living conditions on board Russian-built submarines will hardly make future recruitment any easier for the Indian submarine service.⁷¹

All established submarine services conduct their own training. Some cooperate and send students to each other's schools. The Australian and Canadian navies, for example, both collaborate with Britain and the United States in submarine training. Joint submarine training is also common within NATO.

The threat to international security from the current submarine proliferation around the world may have been exaggerated.

The British and Dutch advanced "Perisher" courses for prospective submarine commanders are increasingly open to other friendly nations'

submarine communities. Students from Australia, Brazil, Canada, Denmark, Norway, Singapore, South Korea, and the United States have all participated in these legendary courses.⁷²

However, navies with little or no previous submarine experience must seek training elsewhere. All major exporters of submarines provide some degree of training to their customers. There is little available information on such programs, but they seem to last between six months and four years, depending on the nations involved. Sometimes such training is organized by the host navies; in other cases the companies building the submarines are in charge. The level of training also depends on the quality of crews sent. Two of the biggest purveyors of submarine training of this kind are France and Russia.

Malaysia is the most recent beneficiary of French submarine training. In January 2005, 156 Malaysian sailors began a program in France that included at-sea training on a retired French navy *Agosta*-class submarine. In December 2005, twenty-three crew members qualified as submariners, and in January 2009, after four years of training, the first Malaysian submarine crew became operational. Information on the level of Malaysian submarine training is scant, but it is known that the Malaysian navy has long-standing problems recruiting qualified sailors and coping with technologically advanced systems.⁷³ In this case, after the Malaysian submarines were brought home, local sea trials were repeatedly delayed, owing to technical and maintenance problems. The submarines have reportedly been unable at times to conduct basic diving exercises, and they have been criticized for not being deployed.⁷⁴ Malaysia has since turned to DCI, a French company, which is participating in the creation and running of a submarine school at the Kota Kinabalu base in Malaysia.⁷⁵

Russia is providing training to its many submarine customers in both the Baltic Sea and in the Far East. Russian submarine training heavily emphasizes classroom teaching and dockside drills.⁷⁶ Because Russian submarines have shorter design life spans than Western boats, Russian-trained crews spend less time at sea, to minimize wear and tear on components and equipment. Also, foreign officers are apparently given command of their boats after comparatively little sea time. The first Vietnamese sailors arrived in Russia in January 2013, with no experience with the type, to begin the theoretical part of their submarine training.⁷⁷ Sea training was conducted near Kaliningrad, on the Baltic Sea, in April and May 2013 and included “five 10-days [*sic*] sea voyages,” according to press reports.⁷⁸ The first boat was officially accepted by the Vietnamese navy on 15 January 2014, and its crew began to operate it, after some ten total months of submarine training.⁷⁹

Vietnam lacks a domestic submarine training school; India has offered to train Vietnamese sailors at its own. Even with sustained Russian and Indian support, however, there are major questions regarding the ability of Vietnam to develop a fully functioning submarine force over the coming years.⁸⁰ Moreover, it is far from clear how these submarines will communicate and fit together with all the other new ships and aircraft Vietnam is currently acquiring from Russia, the Netherlands, Canada, and France. Given the Vietnamese military’s limited experience operating each of these platforms even separately, industry analysts predict that Vietnam will fall somewhere between Singapore (at the high end) and Indonesia (at the low end) in ability to create eventually an effective submarine capability.⁸¹

COMPLICATED AND COSTLY

There is a great concern among many defense analysts that the rapid spread of submarines around the world will threaten international crisis stability. More countries than ever are fielding submarines, but it is less than clear that the risk of conflict and war has increased thereby. In this article I argue that the threat from the growing number of submarines around the world may have been overstated. At the very least, the available evidence indicates that building up and maintaining an effective submarine force are far more complicated and costly than is commonly understood. By examining maintenance facilities and logistics organizations we learn that many countries are not able to keep their boats safely at sea. Having few submarines available, they cannot properly train their crews; the costly mistakes and deadly accidents that result leave even fewer boats and personnel for actual deployment.

Accordingly, any assessment of the strategic threat posed by submarine proliferation should focus on the effectiveness of submarine forces’ maintenance and

logistics organizations, the quality of their recruitment and training processes for crew and commanders, the rates of deployment, and the numbers of patrols conducted. Many of the world's navies are finding it hard to maintain and service their submarines properly or even to recruit and retain qualified personnel, and these services have little opportunity to conduct enough patrols to give their crews the operational experience necessary to deploy effectively.

However, any evaluation of a submarine threat must also take available anti-submarine warfare capabilities into account.⁸² Hunting submarines is difficult and time consuming. Even advanced navies find ASW taxing; as the British discovered during the Falklands War, locating even an old and poorly operated submarine can be a challenge.⁸³ Nevertheless, the very presence of advanced ASW capabilities can be expected to have a deterring effect on a hostile submarine force. For example, during the East Timor crisis in late 1999, Indonesia's two submarines shadowed the fleet carrying the Australian-led peacekeeping force toward Dili. The presence of Indonesian submarines obliged the force to intensify the protection of its sea lines of communications and step up the ASW operations of the escort group of frigates, a destroyer, a cruiser, and ASW patrol aircraft.⁸⁴ However, once the Indonesian submarines had been detected and their locations clearly communicated to the Indonesian authorities the submarines withdrew from the area rather than facing the escorting warships.⁸⁵ (This incident is, of course, also a reminder that any maritime force protection ought to include advanced ASW capabilities, which means that ASW needs to be maintained and further developed as a naval core competency.)⁸⁶

While, then, even poorly operated and maintained submarines can never be completely discounted as threats to international security, we should nevertheless be mindful of the very significant challenges facing many submarine forces around the world. The conclusion is therefore that the general threat to international security from the growing number of submarines appearing in annual naval reviews around the world should not be exaggerated; instead, each case must be carefully examined.

NOTES

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1. See, for example, John Garofano and Andrea J. Dew, eds., *Deep Currents and Rising Tides:*

The Indian Ocean and International Security (Washington, D.C.: Georgetown Univ. Press, 2013); James Goldrick and Jack McCaffrie, *Navies of South-East Asia: A Comparative Study* (New York: Routledge, 2013); and Geoffrey Till, *Asia's Naval Expansion: An Arms Race in the Making?*, Adelphi Series (New York: Routledge, 2012).

2. See, for example, John R. Benedict, "The Unraveling and Revitalization of U.S. Navy Antisubmarine Warfare," *Naval War College Review* 58, no. 2 (Spring 2005), pp. 93–120; Lyle Goldstein and William Murray, "Undersea Dragons: China's Maturing Submarine Force," *International Security* 28, no. 4 (Spring 2004), pp. 161–96; and Jean Grace, "Diesel-Electric Submarines, the U.S. Navy's Latest Annoyance," *National Defense Magazine* (April 2008), pp. 1–6.
3. Stephen Saunders, *Jane's Fighting Ships 2013–2014* (Coulsdon, Surrey, U.K.: IHS Jane's, 2014); Eric Wertheim, *The Naval Institute Guide to Combat Fleets of the World: Their Ships, Aircraft, and Systems*, 16th ed. (Annapolis, Md.: Naval Institute Press, 2014); James P. Delgado, *Silent Killers: Submarines and Underwater Warfare* (Oxford, U.K.: Osprey, 2011); Nicholas Whitestone, *The Submarine: The Ultimate Weapon* (London: Davis-Poynter, 1973).
4. Sherry Sontag and Christopher Drew, with Annette Lawrence Drew, *Blind Man's Bluff: The Untold Story of Cold War Submarine Espionage* (London: Arrow Books, 2000).
5. Benedict, "Unraveling and Revitalization of U.S. Navy Antisubmarine Warfare."
6. Charles A. Meconis and Michael D. Wallace, *East Asian Naval Weapons Acquisitions in the 1990s: Causes, Consequences, and Responses* (Westport, Conn.: Praeger, 2000), pp. 63–64; Sontag and Drew, *Blind Man's Bluff*.
7. Denmark, for example, disbanded its ninety-five-year-old submarine service in 2004. In a strategic choice to focus more on expeditionary operations overseas and less on territorial defense, the Danish government decided to concentrate its naval resources on oceangoing frigates rather than coastal submarines. Danish Ministry of Defence, "Agreement Regarding Danish Defence," Liberals–Conservatives–Social Democrats–Danish People's Party–Social Liberals–Christian Democrats, 10 June 2004, available at www.fmn.dk/.
8. "Submarine Proliferation Resource Collection," *NTI* [Nuclear Threat Initiative], 21 October 2013, pp. 1–3, www.nti.org/. The number of submarines in the world rapidly rose during the Cold War as the United States and the Soviet Union built up their fleets, then diminished; James Clay Moltz, "Submarine and Autonomous Vessel Proliferation: Implications for Future Strategic Stability at Sea" (U.S. Naval Postgraduate School, Monterey, Calif., December 2012), pp. 8–9. The number of countries operating them has increased.
9. "Snapshot: The Global Submarine Market 2011–2021," Naval-Technology.com, 9 June 2011, www.naval-technology.com/; "South American Submarine Industry Set to Grow," *UPI: Business News*, www.upi.com/.
10. "Research: With 150 New Submarines to Be Built until 2021, the Submarine Market Seems to Be on Solid Ground," *Defense Update*, 2 May 2012, defense-update.com/; "Snapshot: The Global Submarine Market 2011–2021"; Adm. Gary Roughead, USN (remarks to the Exponaval Conference, Santiago, Chile, 2 December 2008), in Till, *Asia's Naval Expansion*, p. 84.
11. "Strategic Defence Intelligence: The Global Submarine Market 2013–2023," Naval-Technology.com, July 2013, www.naval-technology.com/.
12. The United States will soon build two to three submarines per year, and Russia has announced a major submarine building program. Christopher P. Cavas, "US Navy Orders 10 New Subs for Record \$17.6B," *Defense News*, 28 April 2014, www.defensenews.com/; Tom Spahn, "The Russian Submarine Fleet Reborn," U.S. Naval Institute *Proceedings* 139/6/1,324 (June 2013).
13. "Submarine Proliferation Resource Collection," *NTI*, 11 July 2013, pp. 1–3, www.nti.org/.
14. Till, *Asia's Naval Expansion*, p. 225; Andrew T. H. Tan, *The Arms Race in Asia: Trends, Causes and Implications* (London: Routledge, 2014); Government of Australia, *Future Submarine Industry Skills Plan: A Plan for the Naval Shipbuilding Industry* (Canberra: Department of Defence, Defence Materiel Organisation, 2013).
15. South Africa has operated submarines since the early 1970s.
16. "Report: Saudi Arabia Eyes Buying German Submarines," *Defense News*, 3 November 2013, www.defensenews.com/.

17. "Bangladesh Navy Plans to Procure Two Submarines," *Naval Technology*, 1 March 2013; "Myanmar Navy Starts Submarine Training in Pakistan," *IHS Jane's Defence Weekly*, 20 June 2013.
18. *The Military Balance* (London: International Institute of Strategic Studies, 2013).
19. "Submarine Base Nears Completion, Now Navy 'Needs' a Fleet," *Bangkok Post*, 13 October 2013.
20. See, for example, "Underwater Arms Race Looms between ASEAN and China," *Nation*, 12 January 2014, www.nationmultimedia.com/, and Zachary Keck, "The Submarine Race in the Malaccan Strait," *Diplomat*, 16 July 2013, thediplomat.com/.
21. Moltz, "Submarine and Autonomous Vessel Proliferation," pp. 8–9.
22. Since 2012 India has leased a Project 971 *Schuka-B* (Akula II) nuclear submarine from Russia in preparation for the entry into the Indian navy of the indigenously built *Arihant* class of nuclear-powered submarines. "Submarine Proliferation Resource Collection: India Submarine Capabilities," *NTI*, 20 August 2013, www.nti.org/.
23. "Update 1: Brazil Launches Program to Build Nuclear Submarine in a Decade," Reuters, 1 March 2013, www.reuters.com/.
24. AIP technology, which uses liquid or compressed oxygen or hydrogen fuel cells, allows submarines to operate their engines without external sources of oxygen. Edward C. Whittman, "Air-Independent Propulsion," *Undersea Warfare* 4, no. 1 (Fall 2001), pp. 12–15, 31.
25. To date, Japan and Singapore have acquired AIP technology from Sweden, while Pakistan has received it from France. See "Kockums Stirling AIP Used by Japan" and "The Archer Class Submarine," *Kockums*, www.kockums.se/; "Submarine Proliferation Resource Collection: Pakistan Submarine Capabilities," *NTI*, 29 July 2013, www.nti.org/.
26. Rajat Pandit, "Pak Adding Submarine Muscle as India Dithers," *Times of India*, 11 April 2011, timesofindia.indiatimes.com/; Farhan Bokhari, "China, Pakistan Set for Submarine Deal by End of Year, Say Officials," *Jane's 360*, 2 February 2014, www.janes.com/.
27. *Military Balance*; Saunders, *Jane's Fighting Ships 2013–2014*.
28. See, for example, Tan, *Arms Race in Asia*, and Till, *Asia's Naval Expansion*.
29. For an attempt to evaluate submarine capability, see Wade H. Schmidt, "A Methodology for Determining Third World Submarine Capabilities: Case Study Iran" (thesis, Naval Postgraduate School, Monterey, Calif., September 1992).
30. An exception is Goldstein and Murray, "Undersea Dragons."
31. Ian Anthony, *The Naval Arms Trade* (New York: Oxford Univ. Press, 1990), p. 49.
32. "Creating a Submarine Force the French Way," *Asian Defense Journal* 8 (1989), p. 46.
33. *White Paper: The Feasibility of a Corrosion Resistant Ship* (Bath, U.K.: BMT Defence Services, 2009), www.bmtdsl.co.uk/.
34. Anthony, *Naval Arms Trade*, p. 49.
35. Personal interviews with senior submarine commanders and engineers in Sweden and the United States, June–December 2013.
36. "Parliament Hears of SA Submarine Woes," *News 24*, 13 December 2010, www.news24.com/.
37. Bobby Jordan, "Not One of the R8 Billion Arms Deal Submarines Is Operational," *Times Live*, 12 August 2012, www.timeslive.co.za/.
38. Personal interview with a former senior naval base commander, Norfolk, Virginia, October 2013.
39. G. M. Hiranandani, *Transition to Eminence: The Indian Navy 1976–1990* (New Delhi: Lancer, 2012), p. xiii.
40. John Coles et al., *Study into the Business of Sustaining Australia's Strategic Collins Class Capability* (Canberra: Commonwealth of Australia, November 2012), pp. i–ii, available at www.defence.gov.au/.
41. Brendan Nicholson and Sarah Martin, "Management Defective, Not Subs: Coles Report," *National Affairs*, 13 December 2012, www.theaustralian.com.au/.
42. Rex Patrick, "Future Submarines: Getting 'Strait' to the Point," *Asia-Pacific Defence Reporter*, 30 August 2012, www.asiapacificdefencereporter.com/.
43. Canada's *Victoria*-class submarines are former *Upholder*-class boats built for the Royal Navy between 1986 and 1993. When Britain

- decided to field only nuclear-powered submarines, the diesel-electric *Upholders* were put up for sale. Canada bought them from Britain and after refurbishment recommissioned them as the *Victoria* class between December 2000 and October 2004.
44. "Canada's Ailing Submarines: Three *Victoria*-Class Subs in for Repairs—HMCS *Windsor* Relaunches after Lengthy Refit," *CBC News*, April 2012, www.cbc.ca/.
 45. Paul T. Mitchell, "The Deal of the Century': Canada's Problematic Submarines in Historical Perspective," *Laurier Centre for Military Strategic and Disarmament Studies*, 28 June 2013, available at canadianmilitaryhistory.ca/.
 46. "Royal Canadian Navy Submarines: Fleet Status (Fact Sheet)," *Government of Canada*, 6 June 2014, news.gc.ca/.
 47. "Archived: Royal Canadian Navy Submarines —Fleet Status," *Government of Canada: National Defence and the Canadian Armed Forces*, 26 November 2013, www.forces.gc.ca/.
 48. "Royal Canadian Navy Submarines: Fleet Status (Fact Sheet)."
 49. *Ibid.*
 50. "Malaysian MoD Receives Additional Allocation for *Scorpena* Submarines," *Malaysian Star*, 4 August 2011, available at www.naval-technology.com/.
 51. According to press reports, the €193 million five-year contract will be effective to 30 November 2015. See "Boustead to Service Malaysian *Scorpena* Submarines," *Naval-Technology.com*, 19 August 2010, www.naval-technology.com/.
 52. Iran insisted that the refurbishment of Kilo-class submarines by Russia be conducted in Iranian shipyards, but Russia refused. "Submarine Proliferation Resource Collection: Iran Submarine Import and Export Behavior," *NTI*, 10 July 2013, www.nti.org/.
 53. Saunders, *Jane's Fighting Ships 2013–2014*.
 54. "Submarine Proliferation Resource Collection: Taiwan Submarine Capabilities," *NTI*, 23 July 2013, www.nti.org/.
 55. "Submarine Proliferation Resource Collection: Indonesia Submarine Import and Export Behavior," *NTI*, 2 August 2013, p. 1, www.nti.org/.
 56. "Argentine Navy Short on Spares and Resources for Training and Maintenance," *Mercopress*, 22 November 2012, en.mercopress.com/.
 57. Leon Engelbrecht, "SA Gets Third Submarine," *Defence and Aerospace Technology*, 5 February 2008, www.itweb.co.za/.
 58. "Creating a Submarine Force the French Way," p. 47.
 59. Rear Adm. R. C. Moffitt, *Report of the Review of Submarine Workforce Sustainability* (Canberra: Royal Australian Navy, 31 October 2008), pp. 39–40.
 60. See Thomas Harding, "Navy 'Running Out of Sailors to Man Submarines,'" *Telegraph*, 20 August 2012, www.telegraph.co.uk/; "Submarines: The Dutch Run Out of Sailors," *Strategy Page*, 3 August 2007, www.strategypage.com/; and interview with commanding officer of 1st Submarine Flotilla, Royal Swedish Navy, in "Intervju med Kommendör Fredrik [sic] Norrby: Chef för Ubåtsflottiljen," *Skipper* (blog), 29 December 2012, navyskipper.blogspot.com/.
 61. See, for example, Kim Eun-jung, "S. Korean Navy Offers Insight into Demanding Submarine Life," *Yonhap News Agency*, 4 August 2005, english.yonhapnews.co.kr/, and Hsu Shao-hsuan, "Submarine Situation Dire: Analyst," *Taipei Times*, 17 January 2011, www.taipeitimes.com/.
 62. Vice Adm. Russ Crane, *Navy's Response to the Submarine Workforce Sustainability Review* (Canberra: Royal Australian Navy, 2009), available at www.navy.gov.au/.
 63. "SAS *Queen Modjaji's* Hull Received 1.5 x 1.5 m Dent in Accident," *Defence Web*, 12 September 2012, www.defenceweb.co.za/.
 64. Jordan, "Not One of the R8 Billion Arms Deal Submarines Is Operational."
 65. "Argentine Navy Short on Spares and Resources for Training and Maintenance."
 66. Eight Foxtrots from Russia between 1966 and 1974, four Type 209s from Germany between 1986 and 1992, and eight Kilos from Russia between 1986 and 1990. Hiranandani, *Transition to Eminence*, p. 118.
 67. *Ibid.*

68. "Indian Navy Chief Resigns after Mumbai Submarine Fills with Smoke," *Guardian*, 26 February 2014, www.theguardian.com/.
69. Rajat Pandit, "Navy's Probe into Submarine INS *Sindhurakshak* Tragedy Nowhere near Completion," *Times of India*, 19 September 2013, articles.timesofindia.indiatimes.com/.
70. "Comments: On Reasons for Sinking of Indian Submarine," *Nation* (Pakistan), 24 August 2013, www.nation.com.pk/.
71. See, for example, V. Sudarshan, "Want to Be a Submariner?," *New Indian Express*, 18 August 2013, newindianexpress.com/.
72. "Perisher: Submarine Command Training in the Royal Navy," *Undersea Warfare* (Spring 2003), www.navy.mil/; "Special: Submarine Command Course," *Van Boord* (March 2001), available in English at www.dutchsubmarines.com/; "Daring to Go Dutch," *Undersea Warfare* (Fall 2003), available at www.dutchsubmarines.com/.
73. Goldrick and McCaffrie, *Navies of South-East Asia*, p. 110.
74. "Malaysia Says First Submarine Unable to Dive," *Defence Talk*, 10 February 2012, www.defencetalk.com/; "Malaysian Navy Caught Napping?," *FMT News*, 3 February 2014, www.freemalaysiatoday.com/; personal interviews with Western naval officers based in the region.
75. "On Job Training," *Défense Conseil International*, n.d., www.groupepci.com/.
76. See Vice Adm. G. M. Hiranandani, *Transition to Triumph: The Indian Navy 1965–1975* (New Delhi: Lancer, 2012), chap. 16, and Gary E. Weir and Walter J. Boyne, *Rising Tide: The Untold Story of the Russian Submarines That Fought the Cold War* (New York: Basic Books, 2003).
77. Vietnam has virtually no experience in operating submarines. According to some sources, in 1997 Vietnam obtained two obsolete Yugo midget submarines from North Korea with which, presumably, to practice underwater operations. The midget submarines can have offered only very limited training opportunities for Vietnamese sailors prior to their arrival in Russia.
78. According to a source in the Russian shipbuilding industry, quoted in "Crew of First Vietnamese Submarine to Make Five 10-Days Sea Voyages," *Interfax*, 12 May 2013, rbth.ru/. See also "Russia to Hand Over Black Hole Sub to Vietnam in November," *RIA Novosti*, 20 July 2013, en.ria.ru/.
79. In July 2013 a second crew arrived in Russia to begin training. See Carlyle A. Thayer, "With Russia's Help, Vietnam Adopts A2/AD Strategy," *Diplomat*, 8 October 2013, thediplomat.com/.
80. Vietnam may turn to India for further submarine training, since the Indian navy also employs Kilos. India may also be willing to lease some of the Vietnamese submarines if Vietnam cannot find crews. "Vietnam Builds Naval Muscle," *Asia Times*, 29 March 2012, www.atimes.com/.
81. Industry experts cited in Carlyle A. Thayer, "Russian Subs in Vietnam," *Diplomat*, 5 February 2013, available at news.usni.org/.
82. Owen Coté and Harvey Sapolsky, "Antisubmarine Warfare after the Cold War" (paper presented at Security Studies Conference Series, Cambridge, Mass., Massachusetts Institute of Technology, 11–12 June 1997).
83. Robert L. Scheina, "Where Were Those Argentine Submarines?," *U.S. Naval Institute Proceedings* (March 1984), pp. 115–20; Sandy Woodward, *One Hundred Days: The Memoirs of the Falklands Battle Group Commander* (Annapolis, Md.: Naval Institute Press, 1992), pp. 17, 78, 105–106.
84. David Dickens, "The United Nations in East Timor: Intervention at the Military Operational Level," *Contemporary Southeast Asia* 23, no. 2 (August 2001).
85. *Ibid.*
86. Benedict, "Unraveling and Revitalization of U.S. Navy Antisubmarine Warfare."



Professor Rubel was Dean of Naval Warfare Studies at the Naval War College from 2008 to 2014. Previously, before retiring from the U.S. Navy in the grade of captain, he was an aviator, participating in operations connected with the 1973 Yom Kippur War, the 1980 Iranian hostage crisis, the TWA Flight 847 crisis, and DESERT SHIELD. He commanded Strike Fighter Squadron 131 and served as the inspector general of U.S. Southern Command. He attended the Spanish Naval War College and the U.S. Naval War College, in Newport, Rhode Island, where he served on the faculty and as chairman of the War Gaming Department, in the Center for Naval Warfare Studies, before his last appointment. He has a BS degree from the University of Illinois; an MS in management from Salve Regina University, in Newport, Rhode Island; and an MA in national security and strategic studies from the Naval War College (1986).

DECONSTRUCTING NIMITZ'S PRINCIPLE OF CALCULATED RISK

Lessons for Today

Robert C. Rubel

*United States Pacific Fleet
USS Pennsylvania, flagship
Flagship of the Commander-in-Chief*

Serial 0114W

May 28, 1942

SECRET

From: Commander-in-Chief, United States Pacific Fleet

To: Commander Striking Force (Operation Plan 29-42)

Subject: Letter of Instruction

1. In carrying out the task assigned in Operation Plan 29-42 you will be governed by the principle of calculated risk, which you shall interpret to mean the avoidance of exposure of your force to attack by superior enemy forces without good prospect of inflicting, as a result of such exposure, greater damage to the enemy. This applies to the landing phase as well as during preliminary air attacks.

C. W. Nimitz¹

All military operations are attended by various forms of risk. Risk permeates the fabric of war—from the actions of individual soldiers, sailors, and airmen to the policies, strategies, and decisions of national leaders. Decisions and actions have both potential and real consequences, and intelligent decision making normally involves a calculation of the odds for success and failure, as well as consideration of the consequences of potential failure. When success is less than a sure thing but through analysis of the salient aspects of the problem, including costs and consequences of failure, a commander decides to proceed nonetheless, we can say that he is taking a “calculated risk.”

Making a decision by such a method is different from proceeding on the basis of doctrine, ideology, or a heuristic. Commanders have adopted tactics and strategies based solely or substantially on prewar plans, political imperatives, or other factors that displace a calculation of risks involved in the issue at hand. In

such cases no calculation of risk is made, but risks are nonetheless incurred. It is the element of consideration and explicit weighing of the odds, of the potential payoff and the potential costs, that distinguishes the calculated risk from other forms of decision making.

In this article we will focus on a very specific kind of calculated risk—the kind that attends the commitment of naval capital ships to battle. While this scenario may seem a subject of interest only to naval historians, the emerging realities of the U.S. Navy’s operational environment demand that we revisit it and examine the prospects for its inclusion in doctrine. The logical starting point is Admiral Chester Nimitz’s famous “letter of instruction” (actually, of course, transmitted as a message) to Rear Admirals Frank Jack Fletcher and Raymond Spruance on the eve of the battle of Midway. To quote a U.S. Navy website, “Nimitz clearly possessed tremendous faith in his subordinates, who were nevertheless guided by very clear instructions. His principle of calculated risk is, perhaps, his most brilliant contribution to the battle, in that it precisely and economically conveyed his intentions to his task force commanders. There was no doubt about what they were supposed to do, how they were supposed to do it, and what level of risk was acceptable.”² We will deconstruct his instruction, teasing out its underlying logic and examining the context in which it was crafted, and then see how the results of the analysis might apply in today’s environment.

CAPITAL SHIPS

Before we can start deconstructing Nimitz’s calculated-risk instruction, we must establish the basis for calculation—the currency, so to speak, of naval power. For most of the nineteenth and twentieth centuries this unit of measurement was the capital ship. The original capital ship was the ship of the line, a large sailing vessel carrying seventy-four or more guns. These ships singly could dominate any other ship type, but they were expensive, so governments could afford to build them only in limited numbers. However, even marginal superiority in numbers, assuming that such factors as seamanship were roughly equal, tended to confer decisive strategic advantage. Capital ships thus became the units of currency in strategic calculations.

The shift from fighting sail to steel dreadnoughts did not appreciably alter the situation. The advent of the submarine and the torpedo at the dawn of the twentieth century was thought by many to spell the doom of capital ships, but the focus on the latter as the basis for naval arms limitation belied that claim. The 1922 Washington Naval Treaty was based on the ratio of capital ships of the principal naval powers of the era. The introduction of the aircraft carrier did not result in the immediate displacement of the dreadnought as the capital ship (and

if one follows the logic of capital ships, there can be only one type at a time), but of course Pearl Harbor propelled the transition.

By early 1942 the aircraft carrier was the ship type that mattered in the Pacific; the numbers available to each side governed where its forces could and could not operate and what missions it could perform at an acceptable degree of risk. Exact numbers of available types of carriers entered prominently into the plans and calculations of both sides. The first encounter between Japanese and American carriers occurred in the battle of the Coral Sea, 4–8 May 1942. In that fight the Japanese lost the light carrier *Shoho*, and the large fleet carrier *Shokaku* was heavily damaged. The U.S. Navy lost *Lexington*, and *Yorktown* was damaged. This left Admiral Nimitz with three carriers—*Enterprise*, *Yorktown*, and *Hornet*—at his immediate disposal and Admiral Yamamoto with four fleet carriers and two light carriers for his contemplated Midway operation. The United States was furiously building aircraft carriers, but these would not start to come on line for at least a year. The Japanese were also building, but because their capacity to do so was limited, each of their carriers was more of an irreplaceable strategic asset than one of the Americans' was.

At this early point in the war, in carrier-versus-carrier battles, the offense had the advantage. It was thought that one carrier air wing could put more than one carrier out of action.³ As a consequence, carrier battles were risky, unstable affairs that hinged on striking effectively first. To do so, a carrier force had to locate its adversary before it was detected itself, or not long after. This was problematic for American carrier forces, because Japanese strike aircraft significantly outranged their U.S. counterparts. This meant that if the U.S. force were to engage on anything like equal terms, it had to avoid detection while at the same time detecting the Japanese force. If timing permitted, the U.S. force would use the cover of darkness to rush toward the Japanese force so that at daybreak its strike aircraft would be in range. However, the use of carrier aircraft as scouts produced a difficult zero-sum situation, as generally these aircraft could not be used in a strike until they had been recovered, refueled, and armed with bombs. When possible, land-based, long-range bombers and patrol planes were used for searches, to increase their “density” (intensity of coverage) and lessen the need for carrier-based scouting. Nonetheless, the ocean is a very large place, and any search scheme, however well designed, involves an element of chance. Most portions of a search area would eventually get covered, but the exact timing of detection was critical.

CALCULATED RISK AT MIDWAY

We start by considering how Nimitz's letter of instruction might have come into play. The principle of calculated risk hangs on the notion of relative attrition of

symmetrical forces. As just discussed, after Pearl Harbor aircraft carriers became the coin of the realm of naval power. Nimitz had only three at his immediate disposal, and he was throwing them all into the fray. In theory, any naval ship is a “consumable” under the right circumstances, but Nimitz understood that if he lost more carriers than the enemy in this battle, its command of the sea would extend all the way to the U.S. Pacific coast; Japanese carriers would be able to strike where and when they wished. American naval airpower had to be preserved, regardless of what became of the small Midway archipelago. In their haste to mount their next operation, the Japanese relied on radio communications to coordinate planning. U.S. Pacific Fleet cryptanalysts were able to read enough of this traffic to establish that Admiral Yamamoto’s next target would be Midway, and in fact they were able to determine intended force dispositions in some detail. This was precious information for Admiral Nimitz. His battle plan was thus predicated on the assumptions that, first, American intelligence on Japanese plans based on code breaking was accurate; second, the Japanese did not suspect the compromise; and third, this forewarning would permit the U.S. task force to get in a devastating first strike.

Tactical Level: Fletcher’s Choice

Nimitz’s letter of instruction states explicitly that Admirals Fletcher and Spruance were to avoid engagement with superior enemy forces unless by so doing they had the chance to inflict greater damage on the enemy than they would expect to receive. As we have seen, the key was to find and strike the Japanese first. How would the task force commanders find out if any of Nimitz’s assumptions were false, at least in time to execute effectively the “avoidance” part of his instruction? First, any enemy radio traffic that could be decoded might give timely warning that the Japanese were on to the fact that their plans were known to the Americans. However, the Japanese navy had just changed its codes, and code breaking was out of the picture at this point.⁴

Beyond that, the key indicator could have been failure of the Japanese carrier force to show up where it was expected to. If air searches by aircraft flying from Midway had failed to yield a sighting of Admiral Chuichi Nagumo’s four-carrier striking force north-northwest of Midway by daybreak on 4 June, as predicted by Nimitz’s intelligence officers, a decision point would have been upon Fletcher. Should he hang around, hoping for a sighting? What if a Japanese scout plane had found him first? (As it happened, the Japanese cruiser *Tone*’s scout plane might have done just that by seven o’clock that morning if it had been launched on time.) Assuming that the Japanese carriers’ flight decks were “spotted” for an antiship strike, as Yamamoto had directed be done and an American commander would have in any case to assume, the prospects for running away

from such a strike were poor. Thus by moving the night before toward the expected position of the Japanese force, Fletcher would have violated Nimitz's guidance. Given that long-range search aircraft had spotted the Japanese invasion force far to the west the day before, one had to assume the carriers were around somewhere.

The decision whether to stay and fight or to cut and run was balanced on a knife-edge. With the omniscience of hindsight we can see that the two forces were about two hundred miles apart when Midway planes first sighted the Japanese carriers. If Fletcher had turned away at that point, the Japanese aircraft, if they got into the air by 0730 and cruised at around 150 knots, could have overtaken him. In theory, then, Fletcher would have needed to break and run no later than about 0600 if no sighting had been made. In fact, the first conclusive sighting report came in at 0552.⁵

Absent any specific information on whether Fletcher had calculated a "fight or flee" time, the razor-thin margin we have calculated suggests that the previous day's sighting of the Japanese invasion force was what triggered commitment, presumably confirming that the intelligence was correct.⁶ For better or worse, by sunrise on 4 June the American task force had been committed to battle and the calculated-risk instruction overtaken by events. Relative attrition was now a matter of tactical skill and luck, the parameters of the battle having been established by the planning and command skills of the respective fleet commanders in chief. There was, however, in the actual conduct of battle one instance of adherence to the calculated-risk directive, and that was Spruance's decision on the evening of 4 June to run eastward to avoid a night surface battle with the Japanese force. Calculated risk or not, this made good tactical sense, as Nagumo's force included two battleships and the American force had only cruisers. We must assume that Nimitz's calculated-risk order at least reinforced Spruance's natural caution.

Operational Level: Nimitz's Calculation

We now back up half a step and look over Nimitz's shoulder as he composes his message on calculated risk. Aside from the intelligence gleaned by his code breakers, there was no good indication of Japanese intentions. They might have been targeting any of a number of places in a vast theater, and Nimitz was under pressure to protect the Aleutians, Hawaii, and even the West Coast. From his perspective, this priceless intelligence represented an opportunity for an ambush. But he would have to go in with all his available carrier forces to have any chance of favorable reciprocal attrition. This was his calculated risk; the prospect of truncating the Japanese strategic initiative was the upside potential that justified the inherent risks of concentrating his three aircraft carriers. Did Nimitz have his own "fight or flee" decision point? Of course, he could have chosen to

second-guess his code breakers and keep his carriers safely out of the range of the Japanese carriers.⁷ If he had, the decision would have occurred in late May. Task Forces 16 and 17 would never have sortied to battle, or—in consideration of the concern of Admiral Ernest J. King, Commander in Chief, U.S. Fleet (COMINCH), that Hawaii was a target—they might have taken up a conservative position to the east.⁸ Nimitz might, in contrast, have banked on Fletcher, as the senior task force commander, being able actually to execute the calculated-risk order on the avoidance side. As we have seen, however, by sunrise on 4 June the likelihood that Fletcher could do so was marginal at best. One wonders what would have been the thought processes of the American chain of command had no sightings been achieved on 3 June.

The possibility of Nimitz's plan's unraveling did not hinge only on a potential absence of timely sightings by reconnaissance aircraft. There was concern from his staff that radio chatter by U.S. Navy units might "tip" the Japanese that the Americans were on to their plans.⁹ The cryptanalysts certainly felt that way, even up to the eve of battle: "HYPO's analysts worried that the Japanese might put two and two together, grasp what was going on, and spring a trap of their own."¹⁰ In fact, Japanese analysts were picking up on such indications, but for various reasons their assessments were not passed to Nagumo. Nagumo's staff actually did intercept some of this information but apparently did not "put two and two together"—at least not in time.¹¹ As with so many aspects of the battle, the Japanese force failed to capitalize on such "seams" and defects as there were in the American plan and its execution. However, from the standpoint of sound military planning, we see that the Americans really had no effective "branch plan" to cover instances like this, a plan that would have brought the principle of calculated risk to the fore.

Strategic Level: King's Order

What did the situation look like from the vantage point of Admiral King, sitting in Washington? King was ostensibly operating under the Allies' agreed "Germany first" strategy, which envisioned an invasion of North Africa in 1942. This operation would require aircraft carrier support; the small carrier *Ranger* had been assigned. Otherwise, King's eye was keenly focused on the Pacific, and he was determined to take the offensive there as soon as conditions permitted. An American defeat at Midway—that is, the loss of two or three carriers—would have set this objective back many months, if not a year or more, whereas the loss of Midway itself, the carriers being preserved, would likely have meant a lesser delay. Thus Nimitz's calculated risk made good sense from King's global perspective, less with respect to other operations than from a timing standpoint. That is probably why, as we will see, he had directed Nimitz to use caution with the carriers and cruisers.

There is another angle on Nimitz's instruction that bears scrutiny. It turns out that the whole idea of calculated risk was likely not Nimitz's in the first place. In a 17 May message to Nimitz, COMINCH provided the following injunction: "In view of last clause of para two chiefly to employ strong attrition tactics and not repeat not allow our forces to accept such decisive action as would be likely to incur heavy losses in our carriers and cruisers."¹² Moreover, there is an entry in Nimitz's records for 25 May that several COMINCH suggestions that had been received by message had been complied with.¹³ Nimitz's estimate of the situation of 26 May is pretty explicit about the matter:

3. Not only our directive from Commander-in-Chief, U.S. Fleet, but also common sense dictates that we cannot now afford to slug it out with the probably superior approaching Japanese forces. We must endeavor to reduce his forces by attrition—submarine attacks, air bombing, attack on isolated units. The principle of calculated chance [*sic*] is indicated, as set forth in a letter of instructions to Task Force EIGHT.¹⁴ If attrition is successful the enemy must accept the failure of his venture or risk battle on disadvantageous terms for him.¹⁵

Indeed, paragraph 3(a)(1) of Operation Plan 29-42 orders, "Inflict maximum damage on enemy by employing strong attrition tactics. Do not accept such decisive action as would be likely to incur heavy losses in our carriers and cruisers. A letter of instructions is being furnished separately to striking force commanders."¹⁶ The mechanisms internal to Nimitz's staff are not known, but here is at least evidence that the calculated-risk principle originated with King. The implications are not only interesting in the context of the history of the battle but also perhaps important for today. The picture that emerges is of an American commander who has gone "all in" to do battle with the Japanese because he believes he has exquisite intelligence that will allow him to gain a decisive victory. This view is backed up by Joseph Rochefort, Nimitz's chief cryptanalyst, who said of a meeting to which he was called on 27 May, "It was obvious when Nimitz sent for me that he had already decided his course of action. He had already made up his own operation orders by this time and the matter was closed."¹⁷

The Japanese Perspective

Although we are dissecting Admiral Nimitz's calculated-risk order, examining the issue from the Japanese perspective gives additional insights. Setting aside the widely reported issue of "victory disease"—the overconfidence that infected the Imperial Japanese Navy at that point in the war—we can see whether there was any corresponding calculation of risk on that side. The Japanese certainly faced potential logistical challenges in seizing and holding Midway, but so long as they avoided pitched battles with land-based American aircraft, their carriers were at liberty to conduct hit-and-run raids almost wherever they wished. In this way the

Japanese could have significantly disrupted and delayed the U.S. Navy's war effort in the Pacific. However, the Midway operation has to be viewed in the context of their larger strategy. Admittedly the operation had a number of nested objectives, among which was eliminating the threat of American interference with projected operations in the "southern resource area." In other words, their carriers would be needed elsewhere later, especially if Midway produced a Japanese victory. However, if the Japanese lost too many carriers in the process, even in victory, these other operations might be delayed or compromised. Thus Admiral Yamamoto might have done well to issue his own calculated-risk directive.

It is also worthwhile examining Admiral Nagumo's actions at Midway on the afternoon of 4 June. The morning had brought disaster, putting three of his four carriers out of action. He had one left, *Hiryu*. Setting aside all the Japanese cultural baggage concerning aggressiveness and focusing instead on the battle at hand, we might apply our calculated-risk reasoning to his decision-making situation. He had just lost three of Japan's six large fleet carriers, and Japanese industry was not in a position to spew out replacements like its American counterpart. *Hiryu* was now more precious than ever.¹⁸ A set of calculations like those we performed before, for Fletcher and Spruance, reveals that shortly after the devastating American attack at 1020, Nagumo would have been at the calculated-risk choice point. If at 1100 he had decided to run west at thirty knots with *Hiryu*, he would have been just outside the range of Spruance's aircraft by the time protective dusk fell. By launching an attack against American forces he ensured the doom of *Hiryu*. Our intent is not to criticize Admiral Nagumo but to illustrate the tactical dynamics of calculated risk. Key decision points sneak up on a commander or can pass unnoticed. These choice points might be tactical, but they necessarily have strategic consequences.

CALCULATED RISK IN TODAY'S ENVIRONMENT

It has been a long time since Nimitz's calculated-risk instruction has had other than historical interest for American naval officers. This, of course, is due to nearly absolute U.S. command of the sea since the end of World War II. Now, however, the rise of China and its navy presents a situation in which calculated-risk logic might very well come into play. The difficulty of actually adhering to this logic, as illustrated by our parsing of Nimitz's directive, suggests that both careful study and analysis are needed, as well as a determined effort to incorporate the logic into education and doctrine.

First, and most obviously, the strategic context for any new instantiation of calculated risk is radically different now than in 1942. The United States enjoys global command of the seas as a default condition; it does not have to win it.

What the United States *does* do is exercise its command of the sea through the forward deployment of its carrier battle groups around the periphery of Eurasia. It does so to deter potential aggressors and generally contribute to the “strategic stability” that allows the global system of trade and security to function smoothly. It is the power-projection-ashore capability of the carriers, coupled with their mobility and ability to be “ready on arrival,” that makes them broadly useful to American presidents. However, the United States has only eleven of them (ten, temporarily), and while this number exceeds the total in the rest of the world combined, it is small enough when all the factors underpinning forward presence are factored in. In view of the strategic purposes of American carriers and the scope of their missions, eleven is not much more sufficient to us today than were three to Nimitz. So American carriers are still scarce strategic assets.

The Global (Strategic) Level

Let us parse today’s version of calculated risk in a top-down manner. Today there is no position of naval command authority equivalent to that of Admiral King, but we can at least take his view in terms of asset management. The recent “rebalance” to the Pacific would seem to mirror a bit the conditions in 1942, when fleet carriers were not a critical asset in the Atlantic. However, the current crisis in Crimea and Ukraine may signal an increased need for carriers in and around the European theater. In the 1960s and ’70s it would have been unthinkable to strip the Atlantic Fleet of carriers, despite the war in Vietnam. However, in those days the U.S. Navy had, at various times, from thirteen to twenty-three carriers. Eleven just barely allows the maintenance of three stations continuously with single carrier strike groups. Any concentration of carriers such as occurred in DESERT STORM (seven) would require the gapping of one or more stations and would disrupt the logistic cycle for years. In 1990 this was an acceptable risk, given the unraveling of the Soviet Union and a China that had not yet built a significant navy. In today’s world such a risk is less strategically acceptable.

Of course, none of this logic has yet considered the notion of carrier losses. The United States can build only one at a time, and each takes four or five years, plus another two for outfitting and workups. In wartime this could be compressed somewhat, but in no way will the Chief of Naval Operations today have the industrial production backstop enjoyed by King and Nimitz. For all intents and purposes, we are in the position of Yamamoto and Nagumo; losses to carriers could not be made good in the likely span of a modern war. This being the case, it becomes important to consider the ends for which the carriers are being risked. Is there a strategic imperative or an upside potential that makes such risk acceptable? This is unknown intellectual territory for admirals several generations removed from June 1942.

The first problem we encounter is that although Russia and China have one aircraft carrier each and China is building more, these ships do not constitute the foundations of their navies' strategic capabilities. So the kind of symmetrical attrition calculation that underpinned Nimitz's instruction does not exist now. We must also note that China's potential military objectives lie close to home, generally beneath a dense missile and airpower umbrella. Defeating Chinese military aggression against Taiwan or various islands in the East and South China Seas would be desirable, but what things can aircraft carriers do that would satisfy the upside of the calculated-risk equation? It is beyond the scope of this article to define what those things might be; the main point here is that we must ask the question, instead of reflexively committing carriers as the Japanese—and perhaps the Americans—did in 1942.

The Regional (Operational) Level

Let's "drill down" a level and examine the issue from a theater order-of-battle perspective. What if Nimitz had possessed a submarine fleet that was perhaps not much larger than the one he had—several American submarines actually got in among Nagumo's carriers at Midway but to no good effect—but was equipped with torpedoes with the range and lethality of the Japanese Long Lance? Maybe that would have changed things. If Nimitz had had enough confidence in such boats, he would not have needed to risk his precious carriers and would still have had a good prospect of sinking Nagumo's. Such a situation would essentially take the calculated-risk equation off the table. Nimitz might lose several submarines in the battle, but these could be made good more quickly than could Japanese losses. We can see that a dozen or so well-placed torpedoes would have been the functional equivalent of several carrier air wings of the era. Such a comparison cannot be made today, because of the fundamentally different warfare environment wrought by missiles and other modern technology, but the overall lesson is still clear and valid—dispersal of credible combat power among submarines or smaller surface combatants removes the embedded dilemma inherent in the calculated-risk equation.

The Local (Tactical) Level

However, we should not stop with the submarines-versus-carriers discussion. Let us descend farther, to the level of Fletcher and Spruance—in today's parlance, the carrier battle group commander. Let's also imagine some kind of crisis involving China or perhaps Iran. The United States has elected to dispatch one carrier or more to the scene as a show of force and resolve. If such positioning puts the carriers inside the threat arcs of hostile missile systems or mixes them among potentially hostile combatants (as was the case in the 1973 Arab-Israeli war), a new version of the calculated-risk equation emerges. Assuming the carrier's

escorts cannot create an impregnable bastion around the carrier, the battle-group commander has a decision to make. Does he or she break and run at some point before shots are fired in order to get untargeted? Doing so could have adverse political effects. In 1973, had U.S. carrier groups run west of the Strait of Sicily to extract themselves from the spiderweb of Soviet missile shooters, the Soviets would have been left in possession of the eastern Mediterranean and Israel would have been isolated. Does simply showing up at the scene of a crisis automatically take the battle group commander past the calculated-risk decision point? It would seem so, as modern aircraft carriers are no more able to outrun antiship missiles than were Nimitz's carriers to outrun Japanese carrier aircraft.

The Chain of Command

In 1942 the U.S. Navy chain of command in the Pacific consisted of three layers. As we have seen, the notion of limiting risk to the aircraft carriers appears to have originated with Admiral King, whose strategic perspective allowed him to weigh objectively the potential costs and benefits of a pitched battle off Midway. His guidance was processed by Nimitz's staff and turned into a letter of instruction to Fletcher and Spruance. Even with so straightforward a process, it appears that neither Nimitz nor his task force commanders really took the principle to heart.

Today the chain of command is not as short or as straightforward, at least from a naval perspective. In the Pacific, a carrier task force commander has above him or her four levels of command: the numbered fleet (say, Seventh Fleet), the theater naval component (Pacific Fleet), the combatant commander (U.S. Pacific Command), and finally the Secretary of Defense. Whatever may be all the potential problems with this arrangement, two are salient here.¹⁹ First, and perhaps most problematic, is the lack of a naval commander with global perspective. The Joint Staff has no command authority, and the secretary's staff is neither designed nor manned to exert direct operational control. Rather, both provide broad policy guidance to the regional combatant commanders. It is therefore not likely that finely tuned assessments of allowable risk to naval forces will emanate from the Pentagon. The second issue resides within Pacific Command itself. Absent any useful risk guidance from Washington, the burden of assessment falls on the combatant commander. However, this officer's perspective is regional, not global, and his or her preoccupation will be obtaining political access—always a consuming challenge—and achieving overall synchronization of joint forces. This leaves the commander of the Pacific Fleet as the uppermost command echelon positioned to assess allowable risk. As we have seen from the battle of Midway example, objectivity about risk can be hard to attain.

Our analysis suggests several potential fixes for this critical emerging issue. The first and perhaps most effective would be for the Navy to develop a

calculated-risk doctrine and ensure that it be incorporated into almost every level of training and education. It needs to become almost an instinctive reflex of officers selected for operational command. We cannot count on the current military command structure to generate such calculations. The second potential fix, much more difficult to put into operation, would be to establish a global-level naval component commander, with staff, responsible for the management of scarce naval resources from a global perspective. Most practically, this would be a collateral duty of the Chief of Naval Operations.

Finally, we have the somewhat murky issue of staff objectivity. Much has been made in the literature of war about the French adherence on the eve of World War I to the doctrine of all-out offense, which produced disaster in the Battle of the Frontiers in 1914. Admiral William F. Halsey's reflexive aggressiveness is also a subject of criticism. Our analysis here provides at least some indication that Nimitz and his staff had developed a collective determination that their communications intelligence was correct—and, of course, there they had good reasons. However, this underlying belief seemed to undercut the written guidance from King, which was put in both the operations order and the letter of instruction. What was not in the instruction was any decision branch that envisioned what to do if the enemy were not located first or by a certain time. This indicates there was no real thought given to a "Plan B" should the searches not have produced results; the American planners were committed to executing a battle plan based on the assumption that their intelligence was accurate. Historically, the results justified that confidence. However, in retrospect we can see that the principle of calculated risk was not observed in the lead-up to the battle. The general danger here is of the development of a form of "groupthink" that leads to unexamined assumptions and potentially lures commanders and staffs into military blunders. Intelligence is a mesmerizing thing. The Allies used it with some effect in the European theater before the invasion of Sicily when they put fake invasion plans in a briefcase and attached it to a cadaver dressed as a diplomatic messenger. The body washed ashore in Spain, where the plans were found and taken to Hitler, who bought the ruse conveyed by the planted papers that the invasion would be in Greece and persisted in believing so in the critical first weeks of the actual invasion.²⁰ It is one thing to rely on intelligence; it is quite another to fail to make provision for retrieving the situation if the intelligence proves false.

Avoiding the Problem

Earlier, we speculated about how Nimitz might have been spared the dilemma inherent in the principle of calculated risk if he had had a substantial flotilla of submarines armed with good torpedoes. The principle of calculated risk, as defined in this article, is a consequence of concentration and scarcity, manifested

in the form of a capital ship—the aircraft carrier. If combat power is distributed and units are relatively numerous, the principle, with its embedded command dilemma, is avoided. In today’s environment, this approach would take the form of smaller combatants, including submarines, armed with antiship missiles and other advanced weapons and sensors. Also embedded in the logic of calculated risk is the idea of the “decisive battle.” Risking scarce and expensive strategic assets in an engagement that does not figure to be strategically, or even operationally, decisive makes no sense. Calculated risk, as specifically defined herein, cannot enter into the decision-making calculus in such a situation. Therefore, if an engagement is likely to be part of a campaign of cumulative attrition—such as the Battle of the Atlantic in World War II—the forces committed ought to be appropriate to the form of warfare envisioned. Given the projected objectives of revisionist coastal states in today’s world, however, it is more likely that drawn-out attrition warfare will result from our attempts to counteract their aggression, unless the United States inappropriately commits its strategic forces to a high-risk environment. Understanding the internal logic of calculated risk can assist in revising the U.S. Navy’s approach to warfare in the littorals.

A NEW SET OF INTELLECTUAL REFLEXES

Our inquiry has revealed several things. First, unless there was in fact some understanding among American commanders on 3 June 1942 that Fletcher and Spruance would “bail out” if there was no sighting of Japanese forces before sunrise on the 4th, the calculated-risk directive was not worth the paper it was written on, regardless of its vaunted clarity. Japanese operational and tactical mistakes only served to cover over this uncomfortable fact. That being said, the logic of calculated risk certainly applied on both sides of the battle. Nagumo had his chance to abide by the logic of relative attrition, but of course no such guidance existed in the Imperial Japanese Navy. In retrospect, if someone were going to back off, it would have been Nimitz himself. However, if the notion of calculated risk was not his in the first place, one wonders whether he was even thinking in those terms. The sighting of the Japanese invasion force on 3 June spared him the decision, if indeed he ever anticipated having to make one. What was really going on was that two fleets were hell-bent on destroying each other, and the subtleties of calculated risk had little or nothing to do with the matter.

Such a negative judgment notwithstanding, we can see that the principle of calculated risk has salience today, perhaps even more than in 1942. Among the many “warfare gaps” that afflict the U.S. Navy today in terms of readiness to fight a high-end war at sea is the intellectual preparation of the officer corps, which has been accustomed to projecting power across the shore with impunity. As China

builds its capability to deny access to the high seas within the first and second “island chains” and as advanced antiship missile technology proliferates, the risks to U.S. aircraft carriers and other forces will escalate, and a new set of intellectual reflexes will be needed, from the local to the global level in the naval command structure. The need is particularly great in view of all the rhetoric that has been advanced over the years asserting the “dominance” that is presumed to be possessed, or else aspired to, by U.S. forces. While dominance is certainly desirable, the facts quietly taking shape in the world suggest that the Navy’s situation is more like that which Admiral Nimitz faced in 1942 than what he enjoyed in 1945. Recognition of the problem is the first step in solving it. There is a particular logic that attends war at sea, and calculated risk, as so elegantly but perhaps futilely articulated by Admiral Nimitz in 1942, is an emerging critical element that deserves more study and consideration.

NOTES

1. This now-declassified document can be found in “Command Summary of Fleet Admiral Chester W. Nimitz, USN: Volume 1 of 8; Running Estimate and Summary Maintained by Captain James M. Steele, USN, CINCPAC Staff at Pearl Harbor, Hawaii, Covering the Period 7 December 1941 to 31 August 1942,” U.S. Naval War College Naval Historical Collection, p. 490, usnwc.edu/Academics/Library/Naval-Historical-Collection.aspx#items/show/849. This recently established online resource is hereafter cited as the “Graybook,” the name (recalling the grey covers of the original document collection) by which it is commonly known.
2. “Midway’s Strategic Lessons,” *Navy History and Heritage Command*, www.history.navy.mil/.
3. Wayne Hughes, *Fleet Tactics and Coastal Combat* (Annapolis, Md.: Naval Institute Press, 2000), pp. 100–101.
4. Elliot Carlson, *Joe Rochefort’s War* (Annapolis, Md.: Naval Institute Press, 2011), pp. 358–59.
5. Rear Adm. Richard Bates, USN, *The Battle of Midway including the Aleutian Phase, June 3 to June 14, 1942: Strategic and Tactical Analysis* (Newport, R.I.: Naval War College, 1948), p. 110.
6. Graybook. The following excerpt gives an indication of the Pacific Fleet staff’s mindset on the evening of 3 June: “The force approaching MIDWAY has grown to 20–23 ships screened by DDs [destroyers]. . . . As the day ends 4 PBYS [Catalina seaplanes] loaded with torpedoes are enroute from MIDWAY for a night attack. The CV [aircraft carrier] attack on MIDWAY is scheduled for tomorrow at dawn. Our RI [radio intelligence] and CI [cryptanalytic intelligence] is [*sic*] proving exceptionally fine.”
7. Reliance on code-breaking intelligence was certainly an issue. In his 21 May estimate of the situation Nimitz saw fit to include the sentences “Our sole source of information for this problem is RI and CI. The enemy may be deceiving us.” *Ibid.*, p. 510.
8. King’s outlook, notwithstanding his admitted agreement with Nimitz’s estimate, can be inferred from the wording of a message he sent on 17 May: “I consider that our appropriate strategy is to make strong concentration Hawaiian Area.” *Ibid.*, p. 490.
9. Among several Graybook entries dealing with the subject is this one: “There is good reason to believe that Orange [i.e., Japan] is using our plane–shore radio traffic to deduce our deployment. This also has the possible result of drying up our information sources” (p. 541).

10. Carlson, *Joe Rochefort's War*, p. 366. "HYPO," or Fleet Radio Unit Pacific, in Hawaii (where Nimitz's headquarters was located), was at that time one of two major Allied signals-intelligence units in the Pacific.
11. Jonathan B. Parshall and Anthony P. Tully, *Shattered Sword: The Untold Story of the Battle of Midway* (Dulles, Va.: Potomac Books, 2005), pp. 98–104.
12. Graybook, p. 490.
13. *Ibid.*, p. 542.
14. It is assumed that "calculated chance" was an early version of "calculated risk."
15. Graybook, p. 520.
16. Operation Plan 29-42 and other documents related to the battle can be found at *Midway, 1942: Facts & Documents*, midway1942.org/.
17. Carlson, *Joe Rochefort's War*, p. 351.
18. Parshall and Tully, *Shattered Sword*, pp. 418–19.
19. For a deeper analysis of these issues see Justin Kelly and Mike Brennan, *Alien: How Operational Art Devoured Strategy* (Carlisle, Pa.: U.S. Army Strategic Studies Institute, September 2009), available at www.strategicstudiesinstitute.army.mil/. See also Robert C. Rubel, "Slicing the Onion Differently," *Joint Force Quarterly* (1st Quarter 2012), available at www.ndu.edu/; repr. in *idem*, *Writing to Think: The Intellectual Journey of a Naval Career*, Newport Paper 41 (Newport, R.I.: Naval War College Press, 2014), pp. 159–70, available at www.usnwc.edu/press.
20. Ben Macintyre, *Operation Mincemeat: How a Dead Man and a Bizarre Plan Fooled the Nazis and Assured an Allied Victory* (New York: Broadway, 2011).

THE AMERICAN “PIVOT” AND THE INDIAN NAVY

It’s Hedging All the Way

Harsh V. Pant and Yogesh Joshi

Just after addressing the Shangri-La Dialogue in Singapore in June 2012, Leon Panetta, then the American secretary of defense, visited New Delhi, where he remarked that “defense cooperation with India is a lynchpin in this [pivot] strategy.”¹ Since the thrust of the “pivot” has been on the maritime balance of power

Harsh V. Pant is Professor of International Relations at King’s College London. He is also a Non-Resident Fellow with the Wadhvani Chair in U.S.-India Policy Studies at the Center for Strategic and International Studies, Washington, D.C. His current research is focused on Asian security issues. His most recent books include The US-India Nuclear Pact: Policy, Process and Great Power Politics (Oxford), The Rise of China: Implications for India (Cambridge), and The Rise of the Indian Navy: Internal Vulnerabilities, External Challenges (Ashgate). Yogesh Joshi is a doctoral candidate at the Centre for International Politics, Organisation and Disarmament, School of International Studies, Jawaharlal Nehru University, India. He has been a fellow at the Sigur Center for Asian Studies, George Washington University, and is currently an international PhD partnering fellow at the Defence Studies Department, King’s College London. His PhD dissertation examines the interaction between political ideologies and international political structure in the making of Indian foreign and national security policy during the Bharatiya Janata Party–led government from 1998 to 2004.

in the Indo-Pacific, both the Pacific and the Indian Oceans have gained tremendous traction in the new U.S. strategy. From the very initiation of the pivot, India has featured on the American radar as an important strategic partner. Based on publicly available Indian government and Indian Navy documents, as well as structured interviews with key Indian naval officials, this article investigates the Indian Navy’s response to the strategy of the pivot and argues that it has had no major influence on its approach to the region. This is evident in the unchanging nature of its exercises with the U.S. and regional navies, stagnation in defense agreements with the United States important for interoperability, and Indian Navy reservations on increasing its constabulary role in the Indian Ocean. This lack of response can be located in the larger strategic discourse that is guiding Indian foreign policy vis-à-vis the changing balance of power in the region. Indian strategy so far has

been primarily to hedge—which translates into reluctance and caution when it comes to actively participating in the pivot.

This article first discusses the current strategic landscape in the Asia-Pacific, underlining the transition of power taking place in the region—that is, China’s ascending relative power vis-à-vis the United States. Further, it reflects on the strategy of the pivot as a response to this strategic flux, suggesting that this power transition is more likely to unfold on the high seas rather than on Asia’s continental landmass and that the Indo-Pacific region, therefore, is geostrategically significant for the success of the pivot. Subsequently, this article focuses on the Indo-Pacific nature of America’s pivot, then on India’s emergence as a potent naval power in the region. India’s maritime strategy, ambitions, and objectives are seen as largely compatible with those of the United States. An empirical appraisal of the Indian Navy’s response to the pivot follows, along three dimensions: naval exercises with the U.S. and regional navies, progress on interoperability with the U.S. Navy, and change in India’s constabulary services in the region. Finally, the article explains the unresponsiveness of the Indian Navy to the American strategy in terms of the larger Indian foreign-policy paradigm. It concludes with some policy recommendations for better coordination between the two countries in the Indo-Pacific, given their mutual apprehensions over China’s regional aims and their compatible objectives in seeking greater regional stability.

THE “PIVOT” AND THE NEED FOR STRATEGIC PARTNERS

In late 2011, the Barack Obama administration issued a series of official statements and policy directives indicating a shift in America’s strategic focus. In a major foreign-policy speech to the Australian parliament, President Obama declared the strategy of a “pivot,” a shift that entailed a strong military commitment to the Asia-Pacific.² Action followed words: it was announced that 2,500 U.S. Marines would be stationed in the Australian port city of Darwin.³ By January 2012, the Pentagon was ready with a major policy directive, *Sustaining U.S. Global Leadership: Priorities for 21st Century Defense*.⁴ The terminology it used to define the new strategic vision—one geared toward the Pacific—was “strategic rebalancing.”⁵

This rebalancing entailed a comprehensive shift in America’s military and diplomatic commitment to the Asia-Pacific. By the summer of 2012 the Department of Defense had declared that 60 percent of America’s naval assets would be stationed under the U.S. Pacific Command.⁶ Washington followed up by increasing its defense cooperation with Vietnam, renewing its military engagement with the Philippines, promising more conventional arms to Taiwan, and permanently stationing a flotilla of littoral combat ships in the port city of Singapore.⁷ New missile-defense systems were installed in East Asia, and similar plans were made

for Southeast Asia. Naval reallocation to the Pacific was followed up with the dedication of 60 percent of the U.S. Air Force to the Pacific theater by mid-2013.⁸ In April 2014, to reassure its Asian allies, President Obama visited a number of key countries in the Asia-Pacific. In Tokyo, Obama declared that the Senkaku Islands fall under the purview of the U.S.-Japan Security Treaty.⁹ He also signed a ten-year defense pact in Manila, paving the way for a greater U.S. military presence in the Philippines.

This dramatic change in U.S. military commitment to the region is largely a function of the astonishing rise of China. Riding high on two decades of double-digit economic growth, China is now on the cusp of becoming a serious regional military power. Capabilities notwithstanding, the transition appears all the more menacing because of China's aggressive posturing in the East and South China Seas, challenging the freedom of navigation in these waters. This behavior has aggravated concerns that a rising China may jeopardize America's basic commitments in the region, such as respect for international law, free and open commerce, open access to the global commons, and the principle of resolving conflict without the use of force.¹⁰

Since most of China's territorial conflicts are spread across the East and South China Seas, naval force projection has gained uncharacteristic momentum for a country that has had for most of its history a continental mind-set. China's maritime strategy and its increasing capabilities underscore, for some, Beijing's Mahanian ambitions.¹¹ It may simply overwhelm the smaller powers in the region. With respect to extraregional powers such as the United States, China's singular objective is to deny them any operational space in its oceanic sphere of influence.¹² Its robust submarine fleet and antiaccess/area-denial capabilities are aimed against any possible intervention by the U.S. Navy.¹³ The Chinese might also use these sea-denial platforms to conduct "anti-SLOC operations" (that is, against sea lines of communications), which its naval doctrine identifies as one of the six legitimate offensive and defensive campaigns it might carry out in the open seas.¹⁴ According to the Pentagon, trends in Chinese military power suggest that the People's Liberation Army Navy's (PLAN's) DF-21D antiship ballistic missile will soon be able to target the entire South China Sea, the Malacca Strait, most of the Bay of Bengal, and parts of the Arabian Sea.¹⁵

Against this background, the pivot strategy "represents a simultaneous attempt to warn China away from using heavy-handed tactics against its neighbors and provide confidence to other Asia-Pacific countries that want to resist pressure from Beijing now and in the future."¹⁶ The focus of the pivot has been extensively on America's freedom and capability to intervene in Asia's littorals to maintain a healthy balance of power. The U.S. Navy, not surprisingly, has received enormous attention in recent years. It is the only service that has escaped the worst

consequences of budgetary sequestration and new capabilities continue to be introduced. Its activity in the Asia-Pacific theater has also seen a spike. However, China's oceanic offensive is not limited to its immediate neighborhood. Though the eastern Pacific is its immediate area of operation, where it would like to have absolute control, lately the Indian Ocean too has gained currency in China's grand strategy. Most of China's trade—energy or otherwise—passes through the SLOCs in the Indian Ocean. China considers the Indian Ocean, with its multiple choke points, its “soft underbelly,” where constant vigilance might be required. America's articulation of a strategy of the pivot has catapulted the Indian Ocean to the center stage of the geopolitical tussle between Washington and Beijing. The Pentagon's “post-pivot” declarations underline that America's “security interests are inextricably linked to developments in the arc extending from the western Pacific and East Asia into the Indian Ocean and South Asia.”¹⁷

The Indian Ocean region (IOR) is the highway of international commerce. Fifty percent of the world's container traffic and 70 percent of its crude and other oil products go through the SLOCs in the Indian Ocean. Securing the Indian Ocean's SLOCs is extremely important for sustenance of U.S. allies in the eastern Pacific, as well as for the international economy.¹⁸ The Indian Ocean's geography makes it an extremely difficult place for an extraregional power to operate. Encircled by strategic choke points such as the Strait of Malacca and Gulf of Aden, the Indian Ocean highway can easily be blockaded by sea-denial strategies. Maintaining a constant presence in the Indian Ocean is therefore a strategic necessity. As two American analysts have argued, the U.S. presence in the Indian Ocean “provides important defense-in-depth for countering threats to strategic chokepoints.”¹⁹

The Indian Ocean may well be the space wherein India and China compete for supremacy in Asia. Whereas China is trying hard to spread its influence in the IOR, India—the preeminent power in the Indian Ocean—is turning its gaze toward the Pacific. This quest for “mastering space” in the Asia-Pacific has led to a naval competition between the two Asian giants.²⁰ The probability that any future conflict over the unsettled Himalayan frontier may spill over to the Indian Ocean and the eastern Pacific remains high. The clash of these geopolitical tectonic plates may ultimately render the Indian Ocean a “cockpit of great power rivalries.”²¹ For all these reasons, the Indian Ocean occupies a distinct place in America's strategic imagination, and therefore the pivot is not restricted to the Pacific. It has redefined Asia's oceanic geography—the Indian and Pacific Oceans have converged to become a “single strategic system.”²² However, as one American scholar cautions, “this reorientation will demand the redeployment of [U.S.] naval forces that have been traditionally split between the Atlantic and the Pacific to the Indo-Pacific, a unified, albeit massive, stretch of water.”²³

Contemporary Asia is witnessing a transition of power largely unfolding in its oceans. As in the great-power transitions of the past, naval force will be the principal determinant in the end result of this strategic flux. However, the success of the pivot and “strategic rebalancing” is far from assured. The ultimate outcome, as has been argued, “will turn on whether Washington has the will, and the wallet, to follow through the initiatives of the last several years.”²⁴ Owing to a large debt burden, the United States is going through an era of austerity. Cuts in defense outlays may range anywhere from \$450 billion to a trillion dollars.²⁵ Though “pivoting” toward Asia means strengthening U.S. naval forces, if the military sequestration continues the Navy will suffer. Cuts in American defense outlays will impinge on the U.S. Navy’s ability to operate simultaneously and with effect in both the Pacific and Indian Oceans, just as the pivot to the Indo-Pacific entails greater commitments in the region.²⁶

It has rightly been suggested that as the United States directs its attention toward the Indo-Pacific and assumes more responsibilities there, “a potential mismatch between US policy objectives and the structure of American naval power looms over the coming decades.”²⁷ This is true especially given that the Indian Ocean’s numerous choke points may demand that “American naval forces confront transcontinental distances, complex strategic geography, and the emergence of anti-access threats that will severely complicate future operations.”²⁸ There is also a growing debate in America about finding suitable partners to share the load of strategic rebalancing. Any overcommitment by Washington would provide an incentive for potential partners to shift the burden onto U.S. shoulders; undercommitment, however, might force them to “bandwagon” with Beijing.²⁹ It is therefore important for the United States to be extremely careful in forging meaningful partnerships with credible strategic partners.

American officials have found a strategic partnership with India extremely enticing, especially in guarding the Indian Ocean from the negative fallouts of China’s rapid rise. Washington continues to express its appreciation of India “as a net security provider in the IOR.”³⁰ Maritime security cooperation between India and the United States has become a strategic necessity, especially for sustaining a favorable strategic equilibrium as Chinese power rises. American strategy, according to some, “should focus on supporting Indian pre-eminence in the Indian Ocean and closer U.S.-India strategic cooperation.”³¹

In both the U.S. government and strategic circles there is an emerging expectation that India should play a significant role in maintaining the maritime balance of power in the Indo-Pacific. The readiness of India to assume that role, however, remains ambiguous, despite New Delhi’s assertions about India’s emergence as an Indo-Pacific maritime power.

INDIA AS AN INDO-PACIFIC MARITIME POWER

India's political leaders, diplomats, and strategic thinkers have been articulating an Indo-Pacific vision for the nation's maritime power in the twenty-first century for some time now. On a visit to Japan in May 2013, Manmohan Singh, then prime minister, mentioned the increasing "confluence of the . . . Pacific and the Indian Oceans," even as he cautioned his audience that "this region faces multiple challenges, unresolved issues and unsettled questions. Historical differences persist despite our growing inter-dependence." This was clearly an allusion to the rise of China and its impact on the region. Maritime security in the Indo-Pacific, therefore, in Singh's view, is "essential for regional and global prosperity."³² The idea of the Indo-Pacific as an arena of geopolitical tussles also informs the Indian Navy's assessment of the strategic environment: "It signifies the fusion of two geopolitically sensitive and economically vibrant regions . . . [and] could well define the future trajectory of political interactions in the 21st century."³³ Accompanying this shift of focus toward the Indo-Pacific is a larger shift in self-perception, in that India's unique geography in the Indian Ocean "gives [it] a point of a pivot" in the Indo-Pacific region.³⁴

In the last two decades, the geographical extent of India's maritime interests has expanded to cover the whole of the Indo-Pacific. This geographical reimagination of India's maritime interests has been driven by India's economic performance and the growing economic opportunities in the East. India's trade with the countries of the Association of Southeast Asian Nations (ASEAN) and with Japan, South Korea, and Australia has increased considerably (see the table). Moreover, with its booming economy, India's energy dependence on the Middle East has also increased; maintaining the flow of energy and commodities has become a prime concern. India is the fourth-largest consumer of oil and gas in the world, and its dependence on imports increased from 40 percent of total demand in 1990 to about 70 percent in 2011.³⁵ Sixty-four percent of these imports come from the Middle East and 17 percent from Africa, making security of supply

INDIA'S TRADE WITH ASEAN, AUSTRALIA, JAPAN, AND SOUTH KOREA

Partners	Trade (billions of dollars, 2007–2008)	Trade (billions of dollars, 2012–13)
India–ASEAN	40	80
India–Australia	10.9	13.8
India–Japan	9.89	16
India–South Korea	11.22	17.44

Sources: Government of India, *Annual Report 2012–13*; idem, *Annual Report 2007–08*.

routes in the Indian Ocean a vital national interest.³⁶ Economics, however, is only one among a number of drivers in this reorientation. Strategic necessities have hugely influenced India's approach to the Indo-Pacific.

India views growing Chinese naval power with concern. For the first five decades of India's independence, its geographical advantage of the Indian Ocean and its limited interests in the East facilitated its lackadaisical approach to maritime security in the Indo-Pacific. China's rapid naval modernization and its forays into the Indian Ocean have forced New Delhi to rethink the role of its navy in maintaining the maritime balance of power. In the last decade, China has developed naval facilities in Burma, Sri Lanka, and Pakistan and is planning to build naval infrastructure in Seychelles.³⁷ Though Beijing considers these installations as economic hubs, some strategists in India argue that economics notwithstanding, they can be later converted into military facilities and used against India as an elaborate "string of pearls" to contain New Delhi's influence in the Indian Ocean.³⁸ The Indian Navy, as is evident from its 2007 doctrine, is particularly alarmed by China's growing naval presence in the region.³⁹ As one senior naval official underlined to the authors, "They [the Chinese] are definitely not building these facilities to develop golf courses."⁴⁰ Though the Indian national security adviser has tried to allay the fears engendered by the "string of pearls" theory, the Indian strategic community remains wary of China's ultimate intentions.⁴¹ China's antipiracy operations in the Gulf of Aden have also raised hackles with some in the Indian Navy who question the need for the PLAN's continuous deployment of two frontline warships and a tanker.⁴² But the rivalry also extends to waters beyond Malacca. If for China the Indian Ocean is not an Indian lake, New Delhi's imperative is to contest impressions in Beijing that the waters east of Malacca automatically fall under the latter's sphere of influence.⁴³ India's naval engagement in the East, therefore, has also been a reaction to China's expansion in the Indian Ocean region. The turf war between the two navies, as both nations further prosper and seek greater roles in regional dynamics, is set to grow. This was illustrated even in the search and rescue operations for the missing Malaysian jetliner MH370 in April 2014. China deployed eight major naval warships in this operation, a presence that may have been unthinkable a decade ago.⁴⁴ China also requested that India allow four of its warships to conduct search operations in the Andaman Sea, which New Delhi categorically rejected, insisting that search operations in that area are its own responsibility.⁴⁵

Another strategic imperative that has facilitated India's naval engagement in the Indo-Pacific is New Delhi's burgeoning relationship with Washington. The end of the Cold War forced India to mend fences with the world's only remaining superpower. However, nuclear proliferation and India's own nuclear status kept bilateral relations tense. Change accompanied the presidency of George W.

Bush. President Bush transformed Indo-U.S. ties by offering India the landmark civil nuclear energy cooperation pact.⁴⁶ His administration perceived India as a rightful competitor with China, with its growing clout in Asia, and foresaw India playing a particularly important role in the Indian Ocean.⁴⁷ Management of maritime threats in the IOR gained further momentum after 11 September 2001. The Indian Navy launched Operation SAGITTARIUS, providing escorts and protection to U.S. ships passing through the Indian Ocean, operationally relieving the U.S. Navy of its constabulary services in the region, and facilitating the American operations in Afghanistan.⁴⁸ Annual joint naval exercises, suspended since 1998, were restarted by India and the United States in 2002, with a series now code-named MALABAR. This interaction fostered “operational cooperation” between the two navies, which, according to the U.S. Department of Defense, was evident in the post-tsunami relief operations in the Indian Ocean in 2004.⁴⁹ Learning from those experiences, the two navies established a “U.S.-India Disaster Response Initiative to spur greater training and engagement to prepare for combined responses to future disasters in the Indian Ocean Region.”⁵⁰

Following the footsteps of the Comprehensive Defence Agreement of 2005, India and the United States signed a Maritime Cooperation Agreement in 2006 that institutionalized cooperation between their navies. INS *Jalashwa*, a *Trenton*-class amphibious ship, joined the Indian Navy in 2007, augmenting its capability to undertake “amphibious and expeditionary warfare.” Subsequently, P8I maritime reconnaissance aircraft were obtained from Boeing, the Indian Navy thereby becoming the “first [foreign] navy in the world,” as India’s external affairs minister told his audience at Harvard University, to operate this “state of the art” aircraft.⁵¹

Strategic necessities notwithstanding, an important agent of change in India’s maritime ambitions has been the Indian Navy itself. Least ideologically driven and also the most strategic minded of all the services in India’s defense establishment, the navy has long articulated the need to expand India’s maritime vision. This ambitious streak in the Indian Navy’s thinking is evident in its policy documents, as well as in its increasing maritime engagement with states across the Indo-Pacific. Indian naval officials and maritime strategists seem to be “intent on a ‘naval forward strategy’ that, logically speaking, could extend eastward into the South China Sea and the Pacific Rim.”⁵² Forward defense of the subcontinent or of India’s traditional sphere of influence in the Indian Ocean means a forward presence on the very edge of the Indian Ocean and beyond in the Pacific. The logic of forward presence is manifest in the *Indian Maritime Doctrine*, a policy document released by the naval arm of the Integrated Headquarters of the Indian military in May 2004.⁵³ Unlike the “limited framework of defensive limited coastal ‘sea-denial’” that had defined the navy’s strategic thinking for the first fifty years of independence, the maritime doctrine in 2004 “moved to a more assertive competitive

strategy for projecting power deeper into and across the Indian Ocean.”⁵⁴ Recognizing that a shift in global maritime focus is taking place “from the Atlantic-Pacific to the Pacific-Indian Ocean region,” the document envisages as one of the major missions of the navy raising the costs of intervention by extraregional powers in India’s maritime sphere of influence.⁵⁵ Equal emphasis was given to the navy’s role as an instrument of diplomacy in the larger interest of India’s foreign policy.⁵⁶ Moreover the doctrine, given the navy’s experiences in escorting U.S. cargo during SAGITTARIUS, also paid attention to the service’s ability to supply international “public goods,” such as the protection of SLOCs, humanitarian assistance, and disaster relief.⁵⁷ The nation’s first document on maritime doctrine in the twenty-first century had an ambitious vision for India’s maritime power.

The Indian Navy also seemed to walk the talk. In 2005, India finally established the Far Eastern Naval Command in the strategic islands of Andaman and Nicobar. The strategic value of the base is evident in the fact that it provides the Indian Navy a forward operating platform in the Indian Ocean only sixty nautical miles from the Strait of Malacca. In consonance with the changing maritime realities and roles the doctrine envisaged, the Indian aircraft carrier INS *Viraat* visited in 2005 for the first time a number of ports in Southeast Asia while transiting to the western Pacific.⁵⁸ The year 2007 was quite eventful for the Indian Navy, insofar as its expansion into the western Pacific is concerned. The MALABAR exercise with the United States was conducted off the coast of Okinawa from 6 to 11 April, followed by a trilateral exercise, called TRILATEX, with the navies of the United States and Japan.⁵⁹ Later, the Indian Navy participated in West Pacific Naval Symposium multilateral at-sea exercises with regional navies in the South China Sea.⁶⁰ If the Indian Navy was sailing across the western Pacific in the spring and summer of 2007, major navies of the region—those of Japan, Australia, and Singapore—and that of the United States gathered in the Bay of Bengal in September to conduct with India a joint multilateral naval exercise called MALABAR 07-02.⁶¹ This was in addition to the annual MALABAR bilateral exercise between India and the United States, and it was one of the largest exercises ever conducted in the region, involving approximately twenty-five ships, 150 aircraft, and twenty thousand personnel. For the first time in the Bay of Bengal, three carrier strike groups, two from the United States and one from India, participated.⁶²

If the underlying reason behind the exercise was to signal to China an impending shift in the regional balance of power, the 2007 policy document issued by the navy, *Freedom of the Seas: India’s Maritime Military Strategy*, conveyed the same. Forewarning India’s decision makers of China’s creeping influence and power-projection capabilities in the Indian Ocean, it stated that the “Chinese navy is set on the path to become a blue-water force [along with] attempts to gain [a] strategic toe-hold in the IOR.”⁶³ This allusion to China’s growing capabilities, in

conjunction with the strategy document's acknowledgment that "strategic objectives of a majority of extraregional navies are broadly coincident with India's own strategic interests," suggests that India's naval strategy in some sense had become China focused.⁶⁴ It is therefore important to note that the document laid great emphasis on maritime cooperation with regional powers, with a clear intention "to prevent . . . incursions by powers inimical to India's national interests."⁶⁵ In 2008, the Indian Navy organized the Indian Ocean Naval Symposium, inviting all navies of the IOR to address regional security challenges multilaterally. The scope of its annual naval exercises with regional navies has also expanded considerably; the MILAN exercises, initiated in 1995 with just five members, have now fourteen regional navies under their ambit. Engagement with other navies has also been institutionalized; the Indian Navy now conducts institutional staff talks with fifteen other national naval forces.

This shift in strategy can also be located in India's increasing capabilities. In a span of two decades, the Indian Navy has seen a growth of 30 percent in its military wherewithal, emerging as the third-largest navy in Asia, after China's and Japan's.⁶⁶ In 1992–93, the navy's share of the defense budget stood at 11.5 percent; by 2012–13, it had grown to 19 percent. Though compared to Japan and China these financial figures may appear small, "in local terms India's military spending now being channeled into naval purposes is significantly greater than naval spending by all other Indian Ocean states."⁶⁷ Capital investment in future capabilities constitutes 50 percent of its budget, much higher than in its sister services. The navy's strategic decision to invest in long-term capabilities has lately started manifesting itself. INS *Vikramaditya*, India's second aircraft carrier and by far the largest ship in its kitty, joined the force in 2013. Though the ship took more than a decade and double the initial cost, the Indian Navy now boasts a very capable force-projection capacity in the Indian Ocean and beyond. Indigenous production of defense equipment is also high on the navy's agenda, with all forty-five vessels currently on order being constructed within India. The nation's first indigenously designed aircraft carrier, INS *Vikrant*, 37,500 tons, was launched in August 2013, entering the second phase of construction, during which it would be fitted with weapon and propulsion systems and the entire aircraft complex. It is set to enter sea trials in 2015–16 and is estimated to be introduced into service by 2017. Designs for another aircraft carrier, INS *Vishal*, are in preparation. The Indian Navy plans to operate three battle groups by the end of this decade.

Its underwater fleet, though a cause of concern both in the Indian Navy and among observers outside, is now bolstered by the advent of its first nuclear submarine. After a long gestation period of over three decades, INS *Arihant*, built under the pseudonym of "Advanced Technology Vessel," may now provide the navy a perennial presence in the depths of Asia's waters.

The navy also has some very ambitious plans for asset acquisition and construction. Under the new five-year Defence Plan for 2012–17 and the Long-Term Integrated Perspective Plan for 2012–27, the “Indian Navy is aiming to induct more than 90 fighting platforms in another ten years.”⁶⁸ Given its past record, incorporation of all these platforms may eventually face delays. It is also important to acknowledge that lately the Indian Navy has been under great scrutiny due to a series of accidents on board major vessels, including the sinking of a submarine owing to malfunctioning electric batteries.⁶⁹ This has further beleaguered a force that already suffers from lack of political clout in New Delhi, as was evident in the speedy acceptance of the resignation of the Chief of the Naval Staff by the defense ministry soon after another accident marred its reputation in February 2014.⁷⁰ Though these developments have undermined the navy’s credibility, its motivation to modernize and to master the space around the Indian Ocean remains as potent as ever.

The above discussion suggests that India’s engagement in maritime Asia is not restricted to the Indian Ocean alone; in fact, the nation is increasingly being perceived as an Indo-Pacific power. India’s official declarations and its naval proactiveness attest to this ambitious portrayal of its maritime sphere of influence. Second, this reimagining of India’s traditional maritime outlook is a result of India’s ascending economic profile. However, China’s growing power and capabilities, its impressive naval modernization, and its slowly advancing footprints in the Indian Ocean area have catapulted the Indo-Pacific to the very center of India’s strategic considerations. These changes in the scope of India’s maritime interests have been facilitated by engagement with other regional powers, such as Japan and Australia, but particularly with the United States. New Delhi’s core strategic objectives in the region are largely compatible with those of Washington.

India’s naval expansion has occurred in a period of relative stability in the Indo-Pacific region, secured by American military supremacy. Aside from a few occasions of activism, India has been reluctant to provide public goods in the region, relying on the United States to do the heavy lifting. However, after the 2008 financial crisis, the sustainability of the U.S. commitment came under increasing scrutiny. Moreover, the U.S. strategy of pivot and rebalancing focuses much more on the Pacific, especially the East and South China Seas, than on the Indian Ocean. Given its geography, threat perceptions, and maritime ambitions, India may now be the natural heir to the American role in the region and particularly in the Indian Ocean.

THE INDIAN NAVY AND THE U.S. “PIVOT”

India’s growing capabilities suggest that it can be an important player in maintaining the maritime balance in the Indo-Pacific. The United States also expects,

and has actively encouraged, India to increase its footprint in the region. The pivot therefore represents a strategic opportunity for India to realize its true potential as an Indo-Pacific power. The Indian Navy's response to this new strategic paradigm can be discerned in naval exercises with the U.S. and regional navies; in progress in interoperability between the Indian and U.S. Navies; and in the constabulary services the Indian Navy offers in the IOR.

The "flagship" naval program between the Indian and U.S. Navies—the MALABAR exercise series—has gathered momentum since 2002. Just after President Obama announced his plans for a pivot to the Asia-Pacific, the 2012 exercise, conducted in the Bay of Bengal, saw unprecedented contribution from the American side—the Seventh Fleet's Carrier Strike Group 1, which included among other ships a *Nimitz*-class aircraft carrier and a nuclear submarine, participated.⁷¹ Though its scope may have been decided long before, coming in the wake of the pivot this exercise conveyed a forceful message. The Indian and U.S. Navies the same year also conducted a joint submarine-rescue exercise off the coast of Mumbai, INDIAEX 12.⁷² Given the fact that the Indian Navy had recently commissioned a nuclear-powered submarine, this focus on submarine rescue suggested a new leap in naval cooperation. In July 2014, MALABAR exercises were conducted off the coast of Sasebo, Japan.⁷³ Japan participated in the exercise on India's invitation. A host of ships, including destroyers, submarines, and long-range maritime reconnaissance aircraft from all three states, were involved in the exercise.

With regard to regional maritime cooperation, the Indian Navy has been partnering with various states in Southeast Asia and Oceania. The SIMBEX exercises, between the Indian Navy and the Republic of Singapore Navy, take place annually and have been conducted all over the Indo-Pacific, including the Malacca Strait and the South China Sea.⁷⁴ Indian naval ships have been regularly calling on ports in Indonesia, Vietnam, and Australia.⁷⁵ Both Australia and Indonesia have shown interest in annual naval exercises with India, which may begin as soon as 2015.⁷⁶

The real development, however, has been in maritime cooperation between the Indian Navy and the Japan Maritime Self-Defense Force. Since 2007, the two services have been constantly interacting with each other in trilateral and multilateral forums but until recently had eschewed bilateral naval engagement. In 2012, the two sides decided to conduct direct bilateral maritime exercises to enhance maritime security in the Asia-Pacific.⁷⁷ The first-ever Indo-Japanese joint naval exercise took place off the coast of Okinawa in June 2012; four Indian ships participated.⁷⁸ It was here that the Indian Navy observed the capabilities of the Japanese US-2 amphibious aircraft, which India now desires to buy. In December 2013 the Japanese navy conducted its first bilateral maritime exercise with the

Indian Navy in the IOR. Indian prime minister Narendra Modi's visit to Japan in September 2014 reinforced this emerging defense partnership. The Memorandum of Cooperation and Exchanges in the field of defense was signed, aimed at institutionalizing the growing military cooperation between the two navies.⁷⁹ In fact, the Tokyo declaration indicates that rather than being an invited participant, Japan may henceforth join the Indo-U.S. bilateral naval exercises as a full partner. If "the future direction of the burgeoning Japan-India strategic relationship will be one of the important indicator[s] of the degree to which U.S. allies and partners within Asia are prepared to align more closely with each other to maintain a favourable strategic equilibrium in the region as the future of Chinese power grows relative to the United States," growing naval cooperation between the two navies suggests that a local balance of power might be slowly emerging in the waters of the Indo-Pacific.⁸⁰

The naval strategy under the pivot focuses extensively on interoperability with regional navies. Given that the new American strategy concentrates on the Indo-Pacific, with a heavy emphasis on naval forces, the U.S. Navy expects to strengthen interoperability with its Indian counterpart. Ever since the New Framework for Defence Cooperation was signed in 2005, followed by the Maritime Security Cooperation Agreement, the United States has been pressing India to conclude a Logistics Sharing Agreement (LSA). However, even after a decade, the "New Framework" remains in limbo; the LSA and two other crucial strategic agreements—the Communication Interoperability and Security Memorandum of Agreement (CISMOA) and the Basic Exchange and Cooperation Agreement (BECA) for Geo-spatial Cooperation—have seen no progress. Proper logistical support arrangements are important for practical cooperation between the two countries. The most important aspect of the LSA is the element of interoperability, whereby collaborating nations can use each other's military equipment, leading to more efficient joint military operations. The strategy of the pivot necessitates increased strategic interaction and cooperation between the U.S. and Indian Navies. But Delhi has given no indication that it is in a hurry to proceed.⁸¹ The new government in New Delhi under Modi has shown more willingness to engage with the United States militarily. During Modi's visit to the United States in September–October 2014, the two nations not only renewed their 2005 defense cooperation agreement for another ten years but also expanded its scope, by declaring that the two countries will "treat each other at the same level as their closest partners" on issues including "defense technology, trade, research, co-production and co-development."⁸² In their joint statement both nations declared their support for freedom of navigation in the South China Sea, signaling that the Modi government is not reluctant to highlight New Delhi's convergence with

Washington on regional issues. The United States expressed its willingness to enhance technology partnership with the Indian Navy. Though the two nations have now decided to upgrade the MALABAR series of exercises, it is not yet clear whether the Modi government is ready to move forward on the LSA, CISMOA, and BECA.

Given that the United States is seeking new partners to provide international public goods in the Indo-Pacific, one would expect India to take its constabulary role in the Indo-Pacific more seriously. However, in 2012, Admiral Nirmal Verma, then the naval chief, categorically rejected any deployment of warships in the Pacific: "At this point of time, Pacific and South China Sea are of concern to the global community, but in terms of any active deployment from our side, it is not on the cards."⁸³ At the same time, he expressed concern that the Indian Navy could do much more in the Indian Ocean region than it was being allowed to. According to the Indian Navy, in the last five years thirty-six of its combat vessels have been involved in supporting maritime security in the IOR, an average of six to seven vessels a year. Given the volume of trade involved and the vast geographical extent of India's maritime interests, this is clearly not sufficient. Also, the "deployment of warships in Gulf of Aden by various navies is not entirely for anti-piracy operations"; it is helpful also for, as an Indian naval commander points out, gaining "experience in out of area deployment," developing "joint-manship," and the most vital of all, increasing the "visibility of the Indian Navy."⁸⁴ In the last decade the Indian Navy's real show of strength in the Indian Ocean was in antipiracy operations in Somali waters in the summer of 2008. Since then it has maintained a continuous presence in the western Indian Ocean and has effectively dealt with specific pirate threats on multiple occasions.⁸⁵

However, India remains reluctant to participate in Combined Task Force 151, an initiative led by the United States, mainly because Pakistan is also a part of it. The Indian Navy, just like those of China and Russia, prefers independent antipiracy operations, or "national escort missions," though it does coordinate with other navies.⁸⁶ Also, the navy's deployment in the western Indian Ocean took place only after a prolonged and bitter debate between the service and the Ministry of External Affairs (MEA).⁸⁷ The issue was the legality of unilateral Indian deployment of force in international waters. As of now, piracy is not a crime under the Indian Penal Code (IPC). Prosecution of captured pirates, therefore, cannot be taken to its logical ends. However, there is a bigger problem for Indian Navy operations in international waters. According to the Parliamentary Standing Committee Report on Anti-Piracy Law, another "limitation of the IPC is that the piratical acts by a foreigner committed outside territorial waters of India do not constitute an offence under the IPC."⁸⁸

This clearly limits the Indian Navy's case for antipiracy operations in international waters. The navy considers that law should be an important enabler in its efforts to curb piracy in the region. "A strong law is definitely needed to avoid ambiguities that exist," opines a senior naval officer who has commanded warships in the Gulf of Aden.⁸⁹ The MEA proposed such a bill in June 2012 but immediately ran into controversy, because the ministry had not consulted the states over its implementation and operationalization. As a result, the bill is still pending in the Indian Parliament.⁹⁰

The legal issue must be juxtaposed to India's historical ambivalence toward the use of force internationally. Traditionally, India has refrained from unilateral use of force outside its territorial jurisdiction and has been comfortable only in United Nations–mandated multilateral security operations. Such reluctance even when the UN Security Council has authorized individual states to combat piracy suggests deep-seated ideological resistance.⁹¹ It also reflects on India's hesitant attitude toward power projection. Given these realities, "ad hocism" pervades India's constabulary role in the Indian Ocean.

As a consequence, the Indian Navy has found it difficult to take full advantage of the new strategic opportunities presented by the U.S. pivot toward the Asia-Pacific. The next section explores the larger political context within India that has prevented the Indian Navy from exploiting the potentials presented to it by the changing strategic realities in the region.

POWER TRANSITION, UNCERTAINTY, AND STRATEGIC HEDGING

Notwithstanding expectations in Washington, Delhi has been a reluctant supporter of the American pivot. Indian official response indicates a preference for hedging—India would not like to choose sides in this great game, at least before the dust settles, allowing it to make informed choices. Former prime minister Manmohan Singh has underscored uncertainty as the driving force behind India's reluctance to participate enthusiastically in the American designs, arguing, "If you survey the global strategic environment over the past decade, it would not escape your notice that, just as the economic pendulum is shifting inexorably from west to east, so is the strategic focus, as exemplified by the increasing contestation in the seas to our east and the related pivot or 'rebalancing' by the United States in this area. This to my mind is a development fraught with *uncertainty*."⁹² Similar anxieties were expressed by the prime minister's special envoy to the United States, Ambassador Shyam Saran, back in February 2009. Commenting on a future "fraught with deep uncertainty" due to the ongoing transitions of power in Asia, Saran prescribed a policy of hedging vis-à-vis the battle between the two great powers, the United States and China.⁹³ Some in the military have argued

similarly that a “balanced and interest based cooperation with both [the United States and China]” allows India “to reduce the risk of over-investing in any of the great powers.”⁹⁴ This early emphasis on hedging is instructive, inasmuch as India and the United States during the presidency of George W. Bush were openly talking of a strategic partnership, shaped partly by China’s growing influence. The Indo-U.S. civilian nuclear cooperation agreement, the high-water mark of this strategic partnership, had just been signed in 2008.

Compared with the Bush era, Indian-U.S. strategic partnership has lost some momentum under the Obama administration. As a senator, Obama opposed the civilian nuclear agreement. As president, in formulating his Afghanistan policy, he tried to “rehyphenate” India and Pakistan, by bringing Kashmir back onto the Indo-U.S. bilateral agenda, which drew a good deal of criticism from New Delhi.⁹⁵ But it was Obama’s idea of a G-2 (a condominium of China and the United States to manage Asia) that was most heavily contested in New Delhi.⁹⁶ In the early days of the first Obama administration senior American officials reportedly told their Indian counterparts that the United States “was not doing balance of power in Asia anymore.”⁹⁷ This view was seen as in strong contrast to the Bush administration’s more geopolitical approach, and it created a flutter in Indian strategic circles, bringing back the memory of American ignorance of Indian concerns that had been the case during the first term of the Clinton presidency. Of course, within two years, the Obama administration’s policy shifted in response to growing Chinese assertiveness, and the president declared the rebalancing strategy.

However, the damage had already been done—at least in perceptions. Hedging made inroads in the Indian mind-set mainly as a result of the Obama administration’s initial strategy of accommodation vis-à-vis China. In the looming maritime competition between India and China, the United States sought to play the role of a distant “sea-based balancer” and “honest broker.” In reaction, India was forced to recalibrate its own position. Reacting to the new stream of thinking in American strategic circles, India’s then national security adviser, Shiv Shankar Menon, explicitly rejected the proposition that India would balance China on America’s behalf: “Is it likely that two emerging states like India and China, with old traditions of state-craft, would allow themselves to remain the objects of someone else’s policy, no matter how elegantly expressed? I think not.”⁹⁸ India also seemed to be recalibrating its activism in securing the Indian Ocean. Its unwillingness to assume alone the mantle of maritime security was evident in the words of Ambassador Nirupama Rao: “While India is seen as a net security provider, we cannot carry the burden of regional security on our shoulders alone.”⁹⁹ If some in New Delhi saw American retrenchment as an extra burden on India, others were deeply skeptical about whether the United States could sustain its commitment in the region, given its dire fiscal state. Reliance on American primacy for ensuring

regional stability appeared to be “an inherently problematic proposition because it relies on U.S. military power which is not only getting thinner on the ground, but no longer has the necessary economic underpinning.”¹⁰⁰

Obama’s initial policy inclination to retrench from Asia and cede the traditional American sphere of influence to Beijing created a sense of vulnerability in India. This vulnerability was accentuated by the fact that a rising India had been used to American primacy. It was ready to take advantage of America’s global leadership, but it was not yet prepared to assume any responsibilities of its own. The uncertainty regarding U.S. intentions in the Asia-Pacific and its own vulnerability in the face of American decline therefore largely determined India’s lukewarm response to the pivot. Even as successive policy statements by American officials and government agencies have prodded it to play a bigger role in the pivot and rebalancing, India has tried to distance itself from the more threatening military connotations of U.S. strategy.

There are some domestic factors as well behind India’s cautious approach. New Delhi remains conscious of the fact that any unilateral naval deployment might provoke reactions from other regional actors. As has been noted, the Indian Navy’s only show of strength in the IOR was in Somali waters in 2008, and its two major tasks in the Indo-Pacific, supporting security for the littoral states and the global commons, have been pursued only on an ad hoc basis.¹⁰¹ India’s preference is for a concert of power in the region, one in which the United States would be just one among several major actors ensuring collective security in Asian waters.¹⁰² This view, however, clearly discounts the fact that a major military transformation is under way in Asia, one that is fundamentally threatening, in that there exist real conflicts among principal participants and uncertainty about their intentions. Another problem may be the difficulty for India of abandoning its habit of free-riding on U.S. guarantees and assuming the weight of securing the Indian Ocean highway from inimical forces.¹⁰³ Lastly, India’s economic growth has stagnated in the last couple of years, as is evident in the decrease in percentage growth of India’s defense budgets. In November 2013, the prime minister warned India’s top military commanders of an impending resource crunch.¹⁰⁴ Capital investment in military modernization may be the first casualty of the decrease in the growth of India’s gross domestic product. Whereas rapid economic growth fueled India’s naval expansion, it is possible that economic reversals may put limits on it. They may direct India inward to the immediate confines of the Indian Ocean. All these factors together have made it difficult for Delhi to assume a more prominent role in the unfolding American foreign-policy posture of strategic rebalancing.

However, the coming into office of the Modi government has raised expectations that New Delhi may alter course. Though Modi’s reading of the future Asian strategic landscape is also underlined by a sense of uncertainty, he seems

more willing than his predecessor to take responsibility in shaping the regional balance of power. This was underscored by his comments in Japan that “greater uncertainty” in Asia only brings “greater responsibility for Japan and India.”¹⁰⁵ He has also been unequivocal about China’s growing assertiveness in Asian waters, emphasizing prevalent tensions in the Indo-Pacific and warning that states should not pursue “expansionist” policies.¹⁰⁶ With the 2005 defense cooperation agreement having been extended for another ten years, military-to-military ties between the United States and India are likely to prosper further. Yet change will not be drastic. The trust deficit accumulated over the last several years between the United States and India will take great investment and time from both sides to overcome. Moreover, lack of clear focus on the Indo-Pacific as Washington continues to struggle to come to terms with multiple crises in the Middle East and Europe will only encourage India to hedge its bets for the foreseeable future, even as the geostrategic flux in the region is likely to shape its foreign policy choices in unprecedented ways.

SITTING ON THE SIDELINES

The U.S. policy of a pivot to the Asia-Pacific requires a strategic partnership with India to maintain a healthy balance of power in maritime Asia. Yet though the Indian Navy has been constantly seeking a bigger role in the region, it appears reluctant to increase its coordination with U.S. forces in the Indian Ocean and beyond. This lack of enthusiasm arises from India’s hedging strategy. India does not want to be seen as allied with the United States. Instead, it wants to sit on the sidelines while the United States and China slug it out for dominance in the Indo-Pacific. India felt highly vulnerable when Washington tried to accommodate Beijing at the expense of other, smaller powers in the region between 2009 and 2011. The idea of a G-2 has made a strong impression on India’s strategic thought. Even now that Washington has committed itself to the pivot, Indian strategic thinkers consider a G-2 a possibility that cannot be ignored. Also, the domestic debate in India over New Delhi’s role in the pivot is fractured.

Nevertheless, India may well participate in the U.S. pivot, given strategic circumstances, if the domestic political context undergoes a change. Meanwhile, there are a few things that the United States can do to decrease India’s sense of vulnerability and encourage its participation.

First, the United States should provide the Indian Navy technological assistance in such key projects as nuclear propulsion and the design and construction of aircraft carriers. This could be the new “nuclear deal,” guiding the future trajectory of Indian-U.S. relations; it would clearly indicate American resolve to help India attain technological sophistication for its defensive preparedness. Indian Navy officials suggest that the force has embarked on an extensive

modernization, which presents America with a rare window of opportunity to establish a “comprehensive military partnership” by selling India “top of the line” defense equipment, complemented by technology transfers. If it does not, Russia would love to fill the gap. Given the fact that the shelf life of contemporary procurements is at least twenty or thirty years, Indian-Russian dependence would continue, as was the case during the Cold War.¹⁰⁷ American technological assistance, on the other hand, would strengthen the hands of those in New Delhi who are proposing closer defense engagement with the United States, while underscoring America’s commitment to India’s rise as a major regional-security provider. Also, Washington should appreciate that a potent Indian Navy would be an important lobbying force behind a gradual expansion of India’s constabulary activity in the IOR. It would also prod the navy to expand its strategic reach to the western Pacific, signaling a shift in the balance of power to Beijing. If the pivot is meant to signal the same thing, technological assistance should guide the U.S. and Indian Navies’ relations in the Indo-Pacific.

Second, Washington must be consistent in signaling its commitment and strategy with respect to the IOR. As is evident from the above discussion, Obama’s early flirtations with China, followed by a more muscular approach in the form of the pivot, created an environment of uncertainty for regional powers. Also, even if other pressing issues—such as the perennial crisis in the Middle East or a sudden downturn in U.S.-Russian relations—might divert substantial strategic focus and resources, Washington should be clear in its commitment to the Asia-Pacific. It was America’s strategic uncertainty that motivated New Delhi to hedge. Hedging may be clever in the short term, but the long-term consequences of China’s rise and assertiveness can be arrested only by a clear display of resolve and will to balance its military power. Clarity and consistency on the part of the United States would help regional powers shed their reluctance to commit themselves to a stable balance of power in the Indo-Pacific.

For its part, India needs to think carefully about its role as a security provider in the Indian Ocean region and beyond. New Delhi’s credibility as a regional balancer has already suffered because of its lackadaisical attitude toward power projection. If it is serious about its emergence as a regional security provider, New Delhi will have to rethink its opposition to the LSA, CISMOA, and BECA, in order to enhance its practical cooperation with the U.S. Navy. There is also an urgent need for a law that would provide strong support to Indian intervention in international waters to combat piracy. Some in India want to wait for a “grand bargain” in which India would become a security provider in the IOR only if the United States assumed significant costs in terms of policies on China, Pakistan, and technology transfer. If that is indeed attempted, New Delhi would be disappointed, as not even a Republican administration would be in a position to deliver.

The larger conundrum remains unresolved: Will India see in the changing regional environment sufficient cause to begin to act in the IOR of its own volition? Or will India step in only because the Americans want it to, hoping to extract concessions in return? Even as Washington and New Delhi try to work this out, they need to acknowledge that they share strategic objectives in the larger Indo-Pacific and should not let their historical baggage override the imperatives of the future.

NOTES

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1. Leon Panetta, "Partners in the 21st Century," *Institute of Defence Studies and Analysis*, 6 June 2012, available at www.idsa.in/.
2. "Remarks by President Obama to the Australian Parliament," *White House*, 17 November 2011, www.whitehouse.gov/.
3. Jackie Calmes, "U.S. Marine Base Irritates China," *New York Times*, 16 November 2011.
4. U.S. Defense Dept., *Sustaining U.S. Global Leadership: Priorities for 21st Century Defense* (Washington, D.C.: 5 January 2012), available at www.defense.gov/.
5. Ibid.
6. "Secretary of Defense Speech," *U.S. Department of Defense*, 2 June 2012, www.defense.gov/.
7. William Wan, "Defense Secretary Leon Panetta Highlights U.S. Ties to Vietnam during Visit," *Washington Post*, 3 June 2012; Luke Hunt, "U.S. Increasing Military Presence in the Philippines," *Diplomat*, 18 December 2012, thediplomat.com/; "Obama Reaffirms Duty to Sell Arms to Taiwan," *China Post*, 10 June 2013, www.chinapost.com.tw/; David Axe, "U.S. Eyes Singapore Base," *Diplomat*, 6 June 2011, thediplomat.com/.
8. Chuck Hagel, "The U.S. Approach to Regional Security" (remarks at the Shangri-La Dialogue: The IISS Asia Security Summit, 1 June 2013), available at www.iiss.org/.
9. Mizuho Aoki, "Obama Assures Abe on Senkaku," *Japan Times*, 24 April 2014, www.japantimes.co.jp/.
10. "Secretary of Defense Speech: Remarks as Delivered by Secretary of Defense Robert M. Gates, Shangri-La Hotel, Singapore, Saturday, June 05, 2010," U.S. Department of Defense, n.d., www.defense.gov/.
11. James R. Holmes, "China's Naval Strategy: Mahanian Ambitions through Maoist Means," *Diplomat*, 21 June 2013, thediplomat.com/.
12. Ronald O'Rourke, *China's Naval Modernization: Implications for U.S. Navy Capabilities—Background and Issues for Congress*, Report for Congress R33153 (Washington, D.C.: Congressional Research Service, 30 September 2013), available at www.fas.org/.
13. Ibid.
14. U.S. Defense Dept., *Military Power of the People's Republic of China*, Annual Report to Congress (Washington, D.C.: 2008), p. 18.
15. U.S. Defense Dept., *Military and Security Developments Involving the People's Republic of China*, Annual Report to Congress (Washington, D.C.: 2010), p. 32.
16. Ronald O'Rourke et al., *Pivot to the Pacific? The Obama Administration's "Rebalancing" toward Asia* (Washington, D.C.: Congressional Research Service, 28 March 2012), p. 4, available at www.fas.org/.
17. U.S. Defense Dept., *Sustaining U.S. Global Leadership*, p. 2.

18. Ian Storey, "Securing South-East Asia's Sea Lanes: A Work in Progress," *Asia Policy*, no. 6 (July 2008), pp. 95–127.
19. Michael J. Green and Andrew Shearer, "Defining U.S. Indian Ocean Strategy," *Washington Quarterly* 35, no. 2 (Spring 2012), p. 178.
20. David Scott, "The Great Power 'Great Game' between India and China: 'The Logic of Geography,'" *Geopolitics* 13, no. 1 (2008), p. 2.
21. Toshi Yoshihara, "The US Navy's Indo-Pacific Challenge," *Journal of the Indian Ocean Region* 9, no. 1 (2013), p. 92.
22. *Ibid.*, pp. 90–103.
23. *Ibid.*, p. 92.
24. Aaron Friedberg, "The Next Phase of the 'Contest for Supremacy' in Asia," *Asia Policy*, no. 14 (July 2012), p. 35.
25. Peter Baker, "Panetta's Pentagon, without a Blank Check," *New York Times*, 23 October 2011.
26. Green and Shearer, "Defining U.S. Indian Ocean Strategy," p. 183.
27. Yoshihara, "US Navy's Indo-Pacific Challenge," p. 90.
28. *Ibid.*, p. 94.
29. Walter C. Ladwig III, "A Neo-Nixon Doctrine for the Indian Ocean: Helping States Help Themselves," *Strategic Analysis* 36, no. 3 (May 2012), p. 392.
30. "Statement of Ambassador Nancy Powell," *United States Senate Committee on Foreign Relations*, 7 February 2012, www.foreign.senate.gov/.
31. Green and Shearer, "Defining U.S. Indian Ocean Strategy," p. 184.
32. "Prime Minister's Address to Japan-India Association, Japan-India Parliamentary Friendship League and International Friendship Exchange Council," *Ministry of External Affairs: Government of India*, 28 May 2013, www.mea.gov.in/.
33. Chief of Naval Staff, "Geo-politics of the Indo-Pacific Region in the Next Two Decades," *Indian Navy*, 21 February 2013, p. 2, indiannavy.nic.in/.
34. "Transcript of External Affairs Minister's Address at the Annual Convention of the Indian Association of International Studies on 'The Dawning of the Asian Century: Emerging Challenges before Theory and Practices of International Relations in India,'" *Ministry of External Affairs: Government of India*, 10 December 2012, www.mea.gov.in/.
35. "India," *U.S. Energy Information Administration: Independent Statistics and Analysis*, 18 March 2013, www.eia.gov/.
36. *Ibid.*
37. Jeremy Page, "Chinese Military Considers New Indian Ocean Presence," *Wall Street Journal*, 14 December 2011. Also see Kamlesh Kumar Agnihotri, *Chinese Quest for a Naval Base in the Indian Ocean: Possible Options for China* (New Delhi: National Maritime Foundation, February 2010), available at www.maritimeindia.org/.
38. Gurpreet Khurana, "China's 'String of Pearls' in the Indian Ocean and Its Security Implications," *Strategic Analysis* 31, no. 1 (2008), pp. 1–22.
39. Government of India, *India's Maritime Military Strategy* (New Delhi: Integrated Headquarters, Ministry of Defence [Navy], 2007), p. 41.
40. Authors' personal interview with a senior Indian Navy official.
41. Shiv Shankar Menon, *Maritime Imperatives of Indian Foreign Policy* (New Delhi: National Maritime Foundation, 11 September 2009), pp. 6–7, available at www.maritimeindia.org/.
42. Sandeep Kharbanda, "Indian Navy's Continued Participation in Sustaining Anti-piracy Operations in IOR and Options for the Future" (unpublished dissertation, National Defence College, New Delhi, 2013), p. 48.
43. Authors' personal interview with a member of the Indian National Security Council.
44. Peter Apps and Tim Hopher, "Rivalries Hamper Hunt for Jet," *Japan Times*, 29 March 2014, www.japantimes.co.jp/.
45. Ananth Krishnan, "In Indian Ocean Waters, India, China Show Maritime Prowess," *Hindu*, 23 March 2014, www.thehindu.com/.
46. For a detailed account of the Indo-U.S. nuclear deal, see Harsh V. Pant, *The US-India Nuclear Pact: Policy, Process and Great Power Politics* (Oxford, U.K.: Oxford Univ. Press, 2011).

47. *Nomination of Colin L. Powell to Be Secretary of State: Hearing before the Committee on Foreign Relations, United States Senate*, 107th Cong., 1st sess., "Statement of Colin Powell," 17 January 2001, available at www.gpo.gov/.
48. David Scott, "India's Aspirations and Strategy for the Indian Ocean: Securing the Waves?," *Strategic Studies* 36, no. 4 (2013), p. 486.
49. U.S. Defense Dept., *Report to the Congress on U.S.-India Security Cooperation* (Washington, D.C.: November 2011), p. 4, available at www.defense.gov/.
50. *Ibid.*
51. "India and the United States: A New Partnership for Progress—Address by External Affairs Minister at Kennedy School, Harvard," *Ministry of External Affairs: Government of India*, 4 October 2013, www.mea.gov.in/.
52. James R. Holmes, Andrew C. Winner, and Toshi Yoshihara, *Indian Naval Strategy in the Twenty-First Century* (New York: Routledge, 2009), p. 61.
53. Government of India, *Indian Maritime Doctrine* (New Delhi: Integrated Headquarters, Ministry of Defence [Navy], 2004).
54. Scott, "India's Aspirations and Strategy for the Indian Ocean," p. 488.
55. Government of India, *Indian Maritime Doctrine*, p. 83.
56. *Ibid.*
57. *Ibid.*
58. C. Raja Mohan, *Samudramanathan: Sino-Indian Rivalry in the Indo-Pacific* (New Delhi: Oxford Univ. Press, 2013), p. 98.
59. Government of India, *Annual Report 2007–08* (New Delhi: Ministry of Defence, 2008), p. 32.
60. *Ibid.*, pp. 32–33
61. *Ibid.*, p. 33.
62. *Ibid.*
63. Government of India, *India's Maritime Military Strategy*, p. 41.
64. *Ibid.*
65. *Ibid.*, p. 83.
66. Walter C. Ladwig, "Drivers of Indian Naval Expansion," in *The Rise of the Indian Navy: Internal Vulnerabilities, External Challenges*, ed. Harsh V. Pant (Surrey, U.K.: Ashgate, 2012), p. 23.
67. Scott, "India's Aspirations and Strategy for the Indian Ocean," p. 491.
68. *Ibid.*, p. 495.
69. Praveen Swami, "Behind Sindhuratna Disaster, a Struggling Navy," *Hindu*, 27 February 2014, www.thehindu.com/.
70. Rajat Pandit, "Navy Chief Admiral D. K. Joshi Quits after Another Submarine Fire, Govt Quickly Accepts Papers," *Times of India*, 27 February 2014, timesofindia.indiatimes.com/.
71. Government of India, *Annual Report 2012–13* (New Delhi: Ministry of Defence, 2013), p. 36.
72. *Ibid.*, p. 37.
73. Joshua Hammond, "Malabar 2014 Kicks Off," *America's Navy*, 24 July 2014, www.navy.mil/.
74. Government of India, *Annual Report 2012–13*, p. 36.
75. *Ibid.*, p. 33.
76. "Minister for Defence and India's Minister of Defence: Joint Statement—Visit of Mr A. K. Antony, Defence Minister of India, to Australia 4–5 June 2013," *Australian Government: Department of Defence*, 5 June 2013, www.minister.defence.gov.au/; Ankit Panda, "India and Indonesia to Conduct Bilateral Naval Exercises," *Diplomat*, 8 February 2014, thediplomat.com/.
77. Government of India, *Annual Report 2012–13*, p. 29.
78. *Ibid.*, p. 35.
79. Government of Japan, "Tokyo Declaration for Japan-India Special Strategic and Global Partnership," *Ministry of Foreign Affairs*, 1 September 2014, p. 2, www.mofa.go.jp/.
80. Michael J. Green, "Japan, India and the Strategic Triangle with China," in *Asia Responds to Its Rising Powers: China and India*, ed. Ashley Tellis, Travis Tanner, and Jessica Keough (Washington, D.C.: National Bureau of Asian Research, 2011), p. 157.
81. Sujjan Dutta, "U.S. Plucks Defence Thorn in Indian Side, Three Pacts Antony Opposed Are Off the Table," *Telegraph*, 7 June 2012, www.telegraphindia.com/.

82. "U.S.-India Joint Statement," *White House*, 30 September 2014, www.whitehouse.gov/.
83. "No Active Deployment of Warships in the Pacific: India," *India Strategic* (August 2012), www.indiastrategic.in/.
84. Kharbanda, "Indian Navy's Continued Participation in Sustaining Anti-piracy Operations in IOR and Options for the Future," p. 48.
85. See Kamlesh K. Agnihotri, "Protection of Trade and Energy Supplies in the Indian Ocean Region," *Maritime Affairs* 8, no. 1 (Summer 2012), p. 21.
86. Kharbanda, "Indian Navy's Continued Participation in Sustaining Anti-piracy Operations in IOR and Options for the Future," p. 29.
87. Iskander Rehman, "India's Aspirational Naval Doctrine," in *Rise of the Indian Navy*, ed. Pant, p. 61.
88. Government of India, *The Piracy Bill* (New Delhi: Ministry of External Affairs, July 2012), p. 5, available at www.prsindia.org/.
89. Kharbanda, "Indian Navy's Continued Participation in Sustaining Anti-piracy Operations in IOR and Options for the Future," p. 42.
90. Iftikar Gilani, "Anti-piracy Bill: MEA Fails to Consult States," *Daily News and Analysis*, 16 August 2012, www.dnaindia.com/.
91. Xan Rice, "UN Authorises Navies to Tackle Somali Pirates," *Guardian*, 3 June 2008.
92. "Excerpts of the Prime Minister Speech at Combined Commander's Conference," *Prime Minister of India: Dr. Manmohan Singh*, 22 November 2013, pmindia.nic.in/ [emphasis added].
93. Shyam Saran, "Geo-political Consequences of Current Financial and Economic Crisis," *India Habitat Center*, 29 February 2009, www.indiahabitat.org/.
94. Brig. Harsha Gupta, "U.S. Pivot to Asia-Pacific: An Estimation of Indian Options" (unpublished dissertation, National Defence College, New Delhi, 2013), pp. 50–51.
95. Laura Rozen, "India's Stealth Lobbying against Holbrooke's Brief," *Foreign Policy*, 24 January 2009; Mukund Padmanabhan, "How India Kept Kashmir Out of Af-Pak Envoy's Brief," *Hindu*, 12 April 2010, www.thehindu.com/.
96. Saran, "Geo-political Consequences of Current Financial and Economic Crisis."
97. Daniel Twining, "Were the India-U.S. Relations Oversold? Part II," *Foreign Policy*, 12 June 2012.
98. Menon, *Maritime Imperatives of Indian Foreign Policy*, pp. 6–7.
99. Nirupama Rao, *India as a Consensual Stakeholder in the Indian Ocean: Policy Contours* (New Delhi: National Maritime Foundation, 19 November 2010), p. 7, available at www.maritimeindia.org/.
100. Arun Prakash, "Assuming Leadership," *Force* (December 2009), sforceindia.net/.
101. C. Raja Mohan, *India and Changing Geopolitics of the Indian Ocean Region* (New Delhi: National Maritime Foundation, 19 July 2010), p. 9, available at www.maritimeindia.org/.
102. Menon, *Maritime Imperatives of Indian Foreign Policy*, p. 5.
103. Holmes, Winner, and Yoshihara, *Indian Naval Strategy in the Twenty-First Century*, p. 54.
104. "Excerpts of the Prime Minister Speech at Combined Commander's Conference."
105. "Text of Prime Minister Shri Narendra Modi's Keynote Address at the Luncheon Hosted by Nippon Kiedanren: The Japanese Chamber of Commerce and Industry and the Japan-India Business Cooperation Committee," *Press Information Bureau, Government of India*, 1 September 2014, pib.nic.in/.
106. Ibid.
107. Based on authors' discussions with senior officers of the Indian Navy.

CHINA'S BLUE SOFT POWER

Antipiracy, Engagement, and Image Enhancement

Andrew S. Erickson and Austin M. Strange

On 3 September 2014, almost six years since Chinese warships first entered the Gulf of Aden to fulfill antipiracy duties, China Central Television (CCTV)-8 aired the first episode of “In the Gulf of Aden” (舰在亚丁湾).¹ The multidozen-episode program, designed to “ignite raging patriotism” (燃起熊熊爱国心), given evening prime-time status, and attracting a popular audience with a star-studded cast, explores in dramatic fashion Beijing’s experience

Dr. Erickson is associate professor in the China Maritime Studies Institute (CMSI), in the Strategic Research Department of the Naval War College, Newport, Rhode Island; an associate in research at the John King Fairbank Center for Chinese Studies, Harvard University; and a term member of the Council on Foreign Relations. He is the author, co-author, or coeditor of, recently, A Low-Visibility Force Multiplier: Assessing China’s Cruise Missile Ambitions (2014), Rebalancing U.S. Forces: Basing and Forward Presence in the Asia-Pacific (2014), Chinese Anti-ship Ballistic Missile Development (2013), Chinese Antipiracy Operations in the Gulf of Aden (2013), and Chinese Mine Warfare (2009).

Mr. Strange is a PhD student studying international relations in Harvard University’s Department of Government. His work mainly focuses on China and its presence in the international system, particularly in the fields of international security, politics, and development. He previously studied at Zhejiang University (MS); Peking University and Tsinghua University; and the College of William and Mary (BA). Strange has also worked as a researcher at CMSI.

fighting modern piracy. Produced by the People’s Liberation Army Navy (PLAN) Political Department’s Television Art Center (海军政治部电视艺术中心) over three years, the series offers a unique window into how the PLAN has conducted its antipiracy mission and seeks to portray its experience to a Chinese audience.

In the first episode’s action-packed beginning, PLAN Vessel 168 deploys special forces by helicopter to repel Somali pirates boarding the crippled China Ocean Shipping (Group) Company vessel *Zhanshan*. Meanwhile, Electro-Mechanical Branch squad leader Sun Weimin helps fix the ship’s stalled engine, enabling it to rejoin the escort formation.² Political commissar Xiao Weiguo subsequently grants Sun a twenty-minute phone call home—twice his previous allocation. Later episodes intersperse the glories of Gulf of Aden operations with the privations of being away from

families, who are separated from service members by thousands of miles and by limitations in information transmission.³ Gripping scenes portray PLAN personnel constantly checking food quality, averting phytosanitary disaster by switching in-port suppliers, refueling under way, weathering storms, exercising with foreign navies and receiving their officers aboard, adjusting plans rapidly to handle unexpected challenges, using special weapons and techniques to dispel pirates nonlethally, saving wounded merchant seamen with emergency medical treatment, and receiving gratitude from domestic and foreign ships they protect.

While some aspects of helicopter operations, weapons firing, and special forces engagement with pirates appear embellished for cinematic effect, the series uses real PLAN personnel and PLAN and civilian ships.⁴ Many details match realistic documentation in China's state and military media. Human experiences are personified uniquely—as when a PLAN marine, Fang Xiaoba, pays respects at the grave of his father, who died rendering medical assistance in Tanzania—but collectively represent actual struggles and triumphs of sailors and families. A few scenarios exceed actual events to date. Most prominently, on a small forested island off Somalia, Team Leader Mao Dahua leads his special forces in a sixteen-hour battle replete with exchanges of fire to evacuate thirteen Taiwanese fishermen cornered by pirates.⁵ Yet such heroics are not utterly fanciful and might well foreshadow future PLAN operations.

Beyond simply serving as a blockbuster image engaging domestic dreams of a strong military, however, since 2008 China's antipiracy escorts have provided important soft-power benefits for Beijing on a truly international stage. For the first time in its modern history China has deployed naval forces operationally beyond its immediate maritime periphery for extended durations, to protect merchant vessels from pirates in the Gulf of Aden. Over a six-year span beginning in December 2008, China has contributed over ten thousand navy personnel in nearly twenty task forces. In nearly eight hundred groups, these forces have escorted over six thousand Chinese and foreign commercial vessels and have “protected and helped over 60” of them.⁶ As the PLAN's commander, Admiral Wu Shengli, informed one of the authors, the mission has achieved “two ‘100 percents’ [两个百分之百]: providing 100 percent security to all ships under escort, while ensuring PLAN forces' own security 100 percent.”⁷

Although it is uncertain how many task forces will be deployed and for how long, China's presence in the Gulf of Aden has extended through 2014, and the PLAN appears almost certain to continue efforts through 2015;⁸ it will likely persist for still longer if the United Nations further extends its mandate for navies to fight piracy off Somalia.⁹ The probability of this is arguably even higher following the announcement in late 2014 that East Asian rival Japan's Maritime Self-Defense Force will soon take command of a major international antipiracy

coalition. While Admiral Wu acknowledges that new piracy challenges have emerged in the Gulf of Guinea, “a concerning trend for all world navies,” he nevertheless maintains, “As long as Gulf of Aden pirate activities continue, so too will the escort missions of international navies.” Six years ago, under United Nations authorization, China began to dispatch antipiracy task forces to the Gulf of Aden. At the beginning, China planned for only one year of antipiracy operations. This period was then extended for another year, and another, and so on. “So far,” Wu declared, “there is no end in sight for the mission.”¹⁰

China’s naval antipiracy mission represents an unprecedented instance of conduct by the PLAN of sustained long-distance operations. It provides a rare window through which outside observers can see how the naval component of China’s “going out” strategy transects economic, political, and strategic dimensions. While many of China’s other maritime activities damage its international image, antipiracy operations in the far seas project soft power and a constructive image. Likely in part because of this positive publicity potential, Beijing has distributed copious details on its antipiracy operations via official media, including in English.¹¹

The Chinese navy’s antipiracy missions provide much-needed support for Chinese overseas interests. But the PLAN has also crafted its antipiracy missions to portray blue-water operations positively abroad. Increasingly, the PLAN’s antipiracy mandate is oriented toward broader international security objectives. Commercial escort statistics exemplify this trend: initially China’s navy was only allowed to escort Chinese-flagged ships through the Gulf of Aden, but now in some cases over 70 percent of ships in given Chinese escort flotillas have been foreign flagged. Similarly, to secure the maritime commons Chinese commanding officers and sailors serving off Somalia have worked increasingly in the framework of bilateral exchanges with other navies as well as in multistakeholder settings.

This article explores the soft-power dimension of China’s far-seas antipiracy operations. It addresses the extent to which Gulf of Aden deployments might increase the PLAN’s prospects for cooperation with other navies and also the impact of these missions on the role the navy plays within China’s larger diplomacy. Finally, it assesses how these deployments might shape future Chinese naval development.

HISTORICAL BACKGROUND

A sharp increase in piracy attacks off Somalia threatened to interfere with China’s foreign trade. Several well-publicized pirate attacks prior to the PLAN’s antipiracy deployment in 2008 demonstrated Chinese vulnerability. *Tianyu 8*, a fishing boat with twenty-four crewmen; the Chinese tanker *Zhenhua 4*; and the

Sinotrans-owned cargo ship *Dajian*—as well as two Hong Kong–registered ships, *Stolt Valor* and *Delight*—were all pirated prior to the PLAN’s deployment.¹² Over 1,200 Chinese merchant vessels transited the Gulf of Aden during the first eleven months of 2008, and of this number eighty-three were attacked by pirate groups. Direct threats to China’s economic interests and citizens abroad were thus important drivers of the PLAN’s first antipiracy deployment.

As the PLAN’s initial deployment prepared to set sail in December 2008, Senior Colonel Huang Xueping, Ministry of National Defense secondary spokesman and deputy director of the ministry’s Information Office, convened a news conference in which he clarified the points that, first, the mission’s primary objective was to protect Chinese shipping interests, and that, second, it did not represent a change in Chinese foreign policy or a desire to project greater blue-water naval capabilities.¹³ Idealistic and realistic interpretations of China’s antipiracy operations differ greatly. The former focuses on China’s desire to contribute meaningfully to regional and international security, while the latter includes a “desire to protect Chinese shipping, expand China’s influence, and to provide opportunities for realistic training that will enhance the PLAN’s capabilities in military operations other than war.”¹⁴

In line with the realists, economic interests in the Gulf of Aden had perhaps the greatest impact on pragmatic Chinese policy makers. As Foreign Ministry spokesman Liu Jianchao explains, “Piracy has become a serious threat to shipping, trade and safety on the seas. . . . That’s why we decided to send naval ships to crack down.”¹⁵ China’s overseas maritime trade is highly dependent on vulnerable sea lines of communication (SLOCs), such as the Bab el Mandeb, Strait of Hormuz, Indian Ocean, Strait of Malacca, Strait of Singapore, and South China Sea. China currently relies on just five SLOCs for roughly 90 percent of its overseas trade. In particular, approximately 60 percent of all commercial vessels that transit through the Strait of Malacca are Chinese flagged.¹⁶

For China, therefore, the economic benefits of protecting its international trade are abundantly clear. China’s leadership continues to emphasize the PLAN’s imperative to secure Chinese overseas maritime interests. Specifically, energy supplies transported via international SLOCs will constitute a larger percentage of China’s aggregate energy consumption. Having become a net oil importer in 1993, for example, China now relies on seaborne oil imports for over 40 percent of its oil consumption.¹⁷ China’s oil import dependence will rise substantially between now and 2030, by some estimates to as high as 80 percent.¹⁸

Oil and other energy imports constitute just one of many sectors in China that face growing dependence on the sea. *China Daily* reported that as early as 2006, maritime industries accounted for \$270 billion in economic output, nearly 10 percent of China’s gross domestic product.¹⁹ In 2009, over 260 companies, across

various industries, reportedly engaged in international maritime shipping.²⁰ In 2010 it was reported that each year over two thousand Chinese commercial vessels were transiting the Gulf of Aden.²¹ In 2011, more than two years after the PLAN's first antipiracy deployment, a professor at China's National Defense University observed, "From the current situation, ocean lifelines have already become a soft rib in China's strategic security."²²

China's growth as a sea power has been rapid. It currently has more seafarers, deep-sea fleets, and ocean fishing vessels than any other nation. It has become, in the words of Ju Chengzhi, of the Ministry of Transport, a "great maritime shipping power" (海运大国). In 2009 China's merchant maritime fleet reportedly consisted of over 3,300 vessels and forty thousand crewmen.²³ *People's Daily* reported in 2011 that China surpassed South Korea as the world's largest ship-builder in terms of capacity and new orders.²⁴ China's maritime responsibilities are huge, since it has thirty-two thousand kilometers of coastline and claims over three million square kilometers of offshore waters.²⁵

Public awareness of the importance of maritime issues is increasing. In 2008, two Chinese media outlets reported separate public surveys in which 86 percent and 91 percent of Chinese citizens polled supported the PLAN's antipiracy deployment.²⁶ Simultaneously, many Chinese "netizens" (frequent Internet users) criticized their government for its inability to ensure Chinese sailors' safety.²⁷ Domestically, in the period before deployments began Beijing thus faced strong political incentives to intervene decisively to protect its shipping.

These political concerns at home paralleled international expectations. Such deployments, it was predicted, would enhance China's image as a "responsible stakeholder" in international society, particularly in the domain of maritime security.²⁸ In the years since, China's antipiracy operations have already aided the PLAN substantially in developing its blue-water capacity.

MILITARY DEVELOPMENT AND BLUE-WATER ASPIRATIONS

Beijing's deployment of PLAN antipiracy forces appears to be spurring on Chinese military development. As the Chinese newspaper *Global Times* puts it, over five years of deployments to the Gulf of Aden have transformed PLAN antipiracy forces from "maritime rookies to confident sea dogs."²⁹ Since China has not fought an actual war since its 1979 conflict with Vietnam, this experience of maintaining multiyear, distant deployments of warships is extremely valuable.³⁰ It has brought PLAN vessels into what previously were—for China—literally uncharted waters. China's Navy Press has had to perform "nautical chart support tasks" for the Gulf of Aden missions.³¹ In 2011, a PLAN senior captain effectively summarized the multidimensional benefits of distant sea antipiracy operations: "The experience definitely would be unprecedented not only for officers and sailors, but also for

the durability and function of the ships.”³² Some of the PLAN’s most advanced ships and personnel have gained valuable experience in the Gulf of Aden, and officers serving with distinction there have enjoyed subsequent promotions.³³

Furthermore, antipiracy operations have positioned the PLAN as China’s most active service. By proving its effectiveness against threats to Chinese overseas interests, the PLAN has ensured that it will continue to procure some of the military’s newest and best technology.³⁴ More broadly, the persistent threat of piracy in international waters has enabled China to expand its far-seas security operations under the umbrella of benign international cooperation.³⁵

Close analysis of PLAN antipiracy activities reveals four primary conduits for projecting soft power: the escort of commercial ships and other direct operational aspects of PLAN antipiracy missions; navy-to-navy meetings, combined training, and other exchanges and instances of cooperation with foreign navies; participation in multistakeholder dialogues on land and at sea related to international antipiracy operations; and, perhaps most significantly, a growing number of port visits conducted by PLAN warships for replenishment and diplomatic purposes before, during, and after service in the Gulf of Aden. Exploiting these channels has positioned the PLAN as an important and highly visible player in China’s comprehensive quest for international soft power.

Antipiracy services provided by the PLAN to commercial ships have primarily included area patrols, escorts, and on-ship protection.³⁶ Wang Yongxiang, deputy commander of the tenth escort task force, explains that specific tactics depend on multiple idiosyncratic factors: “the schedules of the merchant vessels to be escorted, their characteristics, and how well our warships have rested. We want to not only ensure the safety of our charges, but also improve the efficiency of escort protection.”³⁷ Area patrol—monitoring certain maritime zones in and around the Gulf of Aden—is the approach least employed by the PLAN. When China’s navy does engage in area patrols, it typically maintains two base points 550–600 nautical miles apart—for example, one a hundred nautical miles north of Yemen’s Socotra Island and the other seventy-five nautical miles southwest of Aden Harbor.³⁸ On a normal mission PLAN vessels travel between these points, typically taking two to three days to do so.³⁹

Of all the services provided by China’s antipiracy forces, the escort of civilian ships is the most common; it has become a daily practice for PLAN task forces in the Gulf of Aden. Task forces consist of two warships, usually a combination of destroyers and frigates. They are typically accompanied by either a replenishment or landing ship. However, since the first task force, two or more warships concurrently stationed in the Gulf of Aden have led separate flotillas of merchant ships, sometimes in opposite directions, through an area west of longitude fifty-seven east and south of latitude fifteen north.⁴⁰

PLAN escort efficiency has improved significantly since 2008. As a 2010 *Liberation Army Daily* article states, “From the first escort to the escort of the 1,000th ship the Chinese naval task force used over 300 days, from the 1,000th to the 2,000th ship used over 220 days, and from the 2,000th to the 3,000th ship only used over 180 days’ time.”⁴¹ As early as 2011, approximately 70 percent of ships escorted by China’s navy at any given time were foreign.⁴² In terms of aggregate escorts over the first four years, roughly 50 percent of PLAN-escorted commercial vessels were foreign flagged.⁴³ *People’s Navy* reported in mid-2011 that China had provided escort services to ships from over fifty foreign countries, and this figure has likely increased over the past three-plus years.⁴⁴ *People’s Daily* emphasizes that escort services are provided gratis for Chinese and foreign commercial ships.⁴⁵ That is, PLAN escort services are being provided as a complimentary public good to the international community.

Foreign civilian ships can apply online to join a PLAN escort convoy via the China Shipowners’ Association website. Zhai Dequan, deputy secretary-general of the China Arms Control and Disarmament Association, has asserted, “China shoulders responsibility for foreign vessels based on growing national strength and a friendly policy”; many other states do not send escort forces, because of limited interest and the enormous costs. In Zhai’s opinion, “such international cooperation and exchanges also help the rest of the world to know more about China and accept it.”⁴⁶

Given the international context in which China’s antipiracy operations take place, the PLAN has taken steps to professionalize its services. For example, the use of the English language is important while conducting international operations; the twelfth task force had an on-duty translator on board the frigate *Yiyang* to liaise with foreign naval and merchant counterparts.⁴⁷ Each PLAN task-force member receives four “pocket books” covering the psychological aspects of deployment, security, international law, and the application of international law to military operations. Also, naval officers specializing in international law provide full-time legal support to officers and crews in meetings with ships of other nations.⁴⁸ These efforts have assisted China’s internavy exchanges.

INTERNAVY EXCHANGES AND DIALOGUES AT SEA

Chinese and international commentators greatly value the unprecedented exposure of PLAN vessels and crews to foreign navies.⁴⁹ Rear Admiral Michael McDevitt, USN (Ret.), articulates the historical significance of the PLAN’s deployments in this way: “In terms of international engagement, the first decade of the 21st century should be divided into a pre-anti-piracy operations period and a post-anti-piracy period, because once the PLAN began to conduct anti-piracy

operations, the entire nature of its approach to international naval engagement changed appreciably.”⁵⁰

The missions have had an undeniable impact on Chinese naval diplomacy; interaction with foreign navies that was novel in 2008 is now routine in the Gulf of Aden and adjacent waterways. In just a few of countless examples, in 2011 Han Xiaohu, commander of China’s eighth escort task force, visited in March the flagship, a frigate, of NATO’s Operation OPEN SHIELD; in May, hosted the Singapore navy’s Rear Admiral Harris Chan, then commander of U.S.-led Combined Task Force (CTF) 151, on a PLAN warship; and in June hosted the European Union Naval Force (EU NAVFOR) commander on board the frigate *Wenzhou*.⁵¹ The PLAN and Singapore navy conducted bilateral exchanges in September 2010 in the Gulf of Aden, sending personnel on board each other’s ships.⁵² A similar exchange occurred in those waters in June 2014.⁵³ China’s navy conducted additional exchanges with CTF-151 in July 2012 and with NATO in April and July 2012.⁵⁴ An article in *People’s Daily* stated in 2012 that Chinese naval escort task forces continue to inform the outside world about the “activities of suspicious ships through network mailbox and radio station every day and shared information resources with 50-odd warships of 20-plus countries and organizations.”⁵⁵ In July 2014, the PLAN’s seventeenth escort task force conducted the VENUS NO. 2 joint antipiracy exercise with EU Combined Task Force 465 in the western Gulf of Aden. The guided-missile destroyer *Changchun*, the comprehensive supply ship *Chaohu*, and a Z-9 shipborne helicopter participated in task-force maneuvering, maritime replenishment, flashing-light signaling, and main gun antiship firing drills.⁵⁶

China’s naval diplomacy in the region goes well beyond shipboard interactions with Western antipiracy forces. For example, PLAN task forces off the Horn of Africa have also been active in a variety of bilateral exchanges. The PLAN and the Russian navy executed joint antipiracy escorts for the first time in October 2009, during the PEACE BLUE SHIELD 2009 (平蓝盾—2009) exercise.⁵⁷ Similarly, China’s navy held extensive joint exercises with Russian navy BLUE SHIELD units in May 2011 and conducted similar antipiracy joint exercises in both 2012 and 2013.⁵⁸ Amid comprehensive Sino-Russian joint maritime exercises in 2012, Chinese and Russian naval forces performed extensive piracy-deterrence and rescue joint training off the coast of Qingdao.⁵⁹

The Chinese navy is not interacting only with large navies. During November 2009, PLAN military officials met with Dutch counterparts to perform on-ship inspections and exchanges, and during 2010 PLAN forces collaborated with South Korean naval units in antipiracy exercises in the Gulf of Aden.⁶⁰ In 2012, China and South Korea conducted joint antipiracy exercises in which helicopters of the two sides landed on each other’s warships for the first time.⁶¹ In April

2011, China's eighth escort task force sent *Wenzhou* and *Qiandaohu* to conduct joint antipiracy exercises with the Pakistani guided-missile destroyer *Khyber*.⁶² These combined drills followed the Pakistani-hosted PEACE 11 multinational maritime exercises, which included naval ships from, among other states, China, the United States, Britain, France, Japan, and Pakistan. China sent guided-missile frigates *Wenzhou* and *Ma'anshan*, two helicopters, and seventy special forces commandos.⁶³ More recently the PLAN conducted joint antipiracy training with the Ukrainian navy in the Gulf of Aden. All of these efforts support China's growing naval diplomacy.

CHINESE NAVAL DIPLOMACY

At-sea engagements with other navies are crucial for establishing a positive image of China's growing global maritime presence. These engagements are complemented by a growing focus by the PLAN on establishing effective relationships with littoral states in and adjacent to the Indian Ocean region. Indeed, since 2008 the nature and scope of Chinese naval visits have expanded continuously. Growing port calls bolster China's far-seas soft-power projection by facilitating interaction and dialogue between China and the many countries whose ports and geographic locations heighten the strategic value of these relationships.

The PLAN is increasing port visits (see the table) as its far-seas antipiracy presence matures. A small sample reveals the dynamism with which the PLAN is engaging the navies, governments, and citizens of littoral states in connection with its antipiracy missions. For example, during September 2012, *Yiyang* of the twelfth escort task force arrived in Karachi for a second cycle of rest and replenishment, during which it held seminars and other exchanges with Pakistani naval counterparts.⁶⁴ Later that year Rear Admiral Zhou Xuming and members from the twelfth escort task force met with Commodore Jonathan Mead, acting commander of the Australian Fleet, in Sydney on an official visit. The Australian chief of navy, Vice Admiral Ray Griggs, remarked, "I welcome the continued opportunity for our navies to share their experiences today as we exchange lessons learned in the conduct of counter-piracy operations."⁶⁵ More recently, in late 2013 the fifteenth escort task force, in addition to holding friendly exchanges with fleets from the EU, United States, and NATO, docked for friendly visits in Tanzania, Kenya, and Sri Lanka.⁶⁶ The sixteenth task force conducted antipiracy duties and dispatched the guided-missile frigate *Yancheng* to escort Syrian chemical weapons to their destruction;⁶⁷ it then "paid consecutive visits to eight African countries for the first time."⁶⁸ It conducted antipiracy exercises with the navies of several of those countries, including Cameroon, Namibia, and Nigeria.⁶⁹

Clearly, uninterrupted operations in the Gulf of Aden have helped to facilitate PLAN maritime engagement with other countries in the vicinity as well as those

strategically situated on the route from China to Somali waters. China has effectively increased the role of naval diplomacy as a component of its antipiracy deployments in a number of world regions. *People's Daily* reports that "since the 2nd Chinese naval escort task force, the Chinese navy has established a new mechanism of organizing escort warships to pay friendly visits to foreign countries, and the Chinese naval escort task forces have successfully paid friendly visits to more than 20 countries, such as India, Pakistan, the United Arab Emirates (UAE) and Singapore."⁷⁰

Whereas in all of 2009, PLAN task forces berthed in foreign ports in just five states, Chinese antipiracy flotillas have, among them, stopped in over ten countries every year since 2010. Moreover, the nature of port calls has evolved dramatically during the past six years. In 2009 and 2010 most Chinese port calls were conducted for replenishment, rest, and relaxation. But by 2012 Chinese antipiracy escort task forces had begun making several port calls for friendly visits (i.e., goodwill exchanges with diplomatic elements) before, during, and after their service in the Gulf of Aden. This trend has continued over the last two years and demonstrates a growing share of Chinese naval resources devoted to diplomacy. More importantly, it illustrates the efficiency with which the PLAN is deriving soft-power capital from its contributions to international maritime nontraditional security.

China has also bolstered international exchanges by hosting foreign navies at Chinese ports and cities. In mid-May 2011 China invited twenty representatives from eight African nations, including Algeria, Cameroon, and Gabon, to participate in a twenty-day maritime law enforcement program in Zhejiang Province.⁷¹ At the first International Symposium on Counter-Piracy and Escort Cooperation, in February 2012 at the PLAN Command College in Nanjing, Navy Military Studies Research Institute senior researcher Cai Weidong stated, "The Chinese navy hopes to build up a platform for international cooperation that will allow naval forces of different countries to familiarize themselves with each other. I hope the platform well serves our antipiracy goals."⁷²

As these examples illustrate, China has derived incrementally greater soft-power benefits from its antipiracy operations by boosting the number of both midmission port calls and goodwill visits en route home. Chinese scholar Wang Yizhou has called for a higher degree of "creative involvement," a foreign policy concept that identifies and adapts creative and flexible modes of foreign engagement on a case-by-case basis.⁷³ The PLAN seems to be applying Wang's concept in the far seas, perhaps most notably through its antipiracy operations, without changing their fundamental form. Adding more stops before and after antipiracy service in the Gulf of Aden has allowed the PLAN to accumulate larger soft-power gains. This practice reflects the PLAN's greatest lesson from far-seas antipiracy

SELECTED PORT VISITS BY PLAN ANTIPIRACY FORCES

<p>ALGERIA Algiers</p> <ul style="list-style-type: none"> • 2–5 April 2013, friendly visit <p>AUSTRALIA Sydney</p> <ul style="list-style-type: none"> • 18–22 December 2012, friendly visit <p>BAHRAIN Manama</p> <ul style="list-style-type: none"> • 9–13 December 2010, friendly visit <p>BULGARIA Varna</p> <ul style="list-style-type: none"> • 6–10 August 2012, friendly visit <p>BURMA Rangoon</p> <ul style="list-style-type: none"> • 29 August–2 September 2010, friendly visit <p>DJIBOUTI Djibouti</p> <ul style="list-style-type: none"> • 24 January 2010, replenish/overhaul • 3 May 2010, replenish/overhaul • 13 September 2010, replenish/overhaul • 22 September 2010, replenish/overhaul • 24 December 2010, replenish/overhaul • 21 February 2011, replenish/overhaul • 5 October 2011, replenish/overhaul • 24–29 March 2012, replenish/overhaul • 14 May 2012, replenish/overhaul • 13–18 August 2012, replenish/overhaul • 1–6 December 2012, replenish/overhaul • 6–8 June 2013, replenish/overhaul • 28 July 2013, replenish/overhaul • 7–9 October 2013, replenish/overhaul • 22–26 February 2014, replenish/overhaul 	<ul style="list-style-type: none"> • 1–5 April 2014, replenish/overhaul and friendly visit <p>EGYPT Alexandria</p> <ul style="list-style-type: none"> • 26–30 July 2010, friendly visit <p>FRANCE Toulon</p> <ul style="list-style-type: none"> • 23–27 April 2013, friendly visit <p>GREECE Crete</p> <ul style="list-style-type: none"> • 7 March 2011, replenish/overhaul <p>Piraeus</p> <ul style="list-style-type: none"> • 9–13 August 2013, friendly visit <p>INDIA Cochin</p> <ul style="list-style-type: none"> • 8 August 2009, friendly visit <p>ISRAEL Haifa</p> <ul style="list-style-type: none"> • 14–17 August 2012, friendly visit <p>ITALY Taranto</p> <ul style="list-style-type: none"> • 2–7 August 2010, joint drills and friendly visit <p>KENYA Mombasa</p> <ul style="list-style-type: none"> • 2–5 January 2014, friendly visit <p>KUWAIT Shuwaikh</p> <ul style="list-style-type: none"> • 27 November–1 December 2011, friendly visit <p>MALAYSIA Port Kelang</p> <ul style="list-style-type: none"> • 6 December 2009, friendly visit <p>MALTA</p> <ul style="list-style-type: none"> • 26–30 March 2013, friendly visit <p>MOROCCO Casablanca</p> <ul style="list-style-type: none"> • 9–13 April 2013, friendly visit <p>MOZAMBIQUE Maputo</p> <ul style="list-style-type: none"> • 29 March–2 April 2012, friendly visit <p>OMAN Masqat</p> <ul style="list-style-type: none"> • 1–8 December 2011, friendly visit <p>Salalah</p> <ul style="list-style-type: none"> • 21 June–1 July 2009, replenish/overhaul 	<ul style="list-style-type: none"> • 14 August 2009, replenish/overhaul • 2 January 2010, replenish/overhaul • 1 April 2010, replenish/overhaul • 8 June 2010, replenish/overhaul • 10 August 2010, replenish/overhaul • 8 January 2011, replenish/overhaul • 19 January 2011, replenish/overhaul • 10 April 2011, replenish/overhaul • 8–11 June 2011, replenish/overhaul • 23 June 2011, replenish/overhaul • 7–10 November 2011, replenish/overhaul • 21–24 February 2012, replenish/overhaul • 1–3 July 2012, replenish/overhaul • 9 July 2012, replenish/overhaul • 28–29 March 2013, replenish/overhaul <p>PAKISTAN Karachi</p> <ul style="list-style-type: none"> • 5–8 August 2009, joint drills and friendly visit • 7–13 March 2010, joint drills and friendly visit • 13 March 2011, joint drills • 8 September 2012, replenish/overhaul <p>PHILIPPINES Manila</p> <ul style="list-style-type: none"> • 13–17 April 2010, friendly visit <p>PORTUGAL Lisbon</p> <ul style="list-style-type: none"> • 15–19 April 2013, friendly visit <p>QATAR Doha</p> <ul style="list-style-type: none"> • 2–7 August 2011, friendly visit <p>ROMANIA Constanța</p> <ul style="list-style-type: none"> • 31 July–3 August 2012, friendly visit
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SELECTED PORT VISITS BY PLAN ANTIPIRACY FORCES CONTINUED

<p>SAUDI ARABIA Jidda</p> <ul style="list-style-type: none"> • 27 November–1 December 2010, friendly visit • 3 September 2011, replenish/overhaul • 17 June 2012, replenish/overhaul • 1–6 January 2013, replenish/overhaul • 5–28 April 2013, replenish/overhaul • 14–18 September 2013, replenish/overhaul • 2–6 November 2013, replenish/overhaul <p>SEYCHELLES Port Victoria</p> <ul style="list-style-type: none"> • 14 April 2011, friendly visit • 16–20 June 2013, friendly visit <p>SINGAPORE Changi</p> <ul style="list-style-type: none"> • 5–7 September 2010, replenish/overhaul and joint drills • 18–20 December 2011, replenish/overhaul and friendly visit • 5–10 September 2013, friendly visit 	<p>SOUTH AFRICA Durban</p> <ul style="list-style-type: none"> • 4–8 April 2011, friendly visit <p>SRI LANKA Colombo</p> <ul style="list-style-type: none"> • 5–7 January 2010, friendly visit • 7–12 December 2010, friendly visit <p>Trincomalee</p> <ul style="list-style-type: none"> • 13–15 January 2014, friendly visit <p>TANZANIA Dar es Salaam</p> <ul style="list-style-type: none"> • 26–30 March 2011, joint drills and friendly visit • 29 December 2013–1 January 2014, friendly visit <p>THAILAND Sattahip</p> <ul style="list-style-type: none"> • 16–21 August 2011, joint drills and friendly visit • 21–25 April 2012, friendly visit • 12–16 September 2013, friendly visit <p>TURKEY Istanbul</p> <ul style="list-style-type: none"> • 5–8 August 2012, friendly visit 	<p>UKRAINE Sevastopol</p> <ul style="list-style-type: none"> • 31 July–3 August 2012, friendly visit <p>UNITED ARAB EMIRATES Abu Dhabi</p> <ul style="list-style-type: none"> • 24–28 March 2010, friendly visit <p>VIETNAM Ho Chi Minh City</p> <ul style="list-style-type: none"> • 13 January 2013, friendly visit <p>YEMEN Aden</p> <ul style="list-style-type: none"> • 21 February 2009, replenish/overhaul • 25 April 2009, replenish/overhaul • 23 July 2009, replenish/overhaul • 28 September 2009, replenish/overhaul • 5 February 2010, replenish/overhaul • 16 May 2010, replenish/overhaul • 26 July 2010, replenish/overhaul • 1 October 2010, replenish/overhaul
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missions: there is no substitute for experience, and six years of continuous operations have allowed China gradually to become more effective in securing its comprehensive interests through the deployment of antipiracy task forces.⁷⁴

Arguably even more than foreign port calls, other nontraditional maritime security operations facilitated by Beijing’s Gulf of Aden antipiracy presence contribute to China’s “blue soft power.” Escort of foreign vessels carrying Syrian chemical weapons through the Mediterranean and active participation in search and rescue operations during the frantic search for Malaysian Airlines Flight 370 in early 2014 are just two examples of how the PLAN has leveraged antipiracy resources to contribute to international security.⁷⁵

Some commentators are less sanguine about China’s attempts to expand its maritime relations; it is important to note that there are objections to the notion that China’s antipiracy missions are benign. In that view, self-interested economic and security calculations are arguably the largest drivers of the PLAN’s deployment of warships to the Gulf of Aden, and viewing port visits as diplomatic exchanges risks oversimplification, since many states may view them as

harbingers of creeping Chinese power projection.⁷⁶ For example, the tiny island-state Seychelles is one of several coastal and island African states in which China has actively sought to enhance its soft power.⁷⁷ China could be using antipiracy operations to support an expansive naval development policy, as well as to pursue a more active grand strategy that involves overseas access facilities and a long-term trend toward a greater overall global presence.

CHINESE NAVAL DEVELOPMENT

The PLAN is just one of several “independent” providers of antipiracy assets in the Gulf of Aden. While the majority of naval antipiracy forces fight pirates under the aegis of multilateral commands, several states—including China, India, Iran, Japan, Malaysia, and Russia—have primarily operated on a unilateral basis rather than under the command of multinational antipiracy forces such as CTF-151, NATO’s Operation OPEN SHIELD, or EU NAVFOR. This posture suggests that China is trying to learn as much as it can from other navies without revealing much about its own operations, while also, clearly, maintaining ideological independence in foreign policy.

China’s preference to abstain from combined operations is driven by several factors. First, greater independence allows the PLAN to conduct its preferred method of antipiracy operations—relatively low-risk escort operations aimed at deterring, rather than actively searching for, pirates. It also offers China an individual identity as a provider of maritime public goods, rather than as just another state operating within Western-led security mechanisms. Moreover, if China joined the existing security structure, potential frictions might arise that would preclude meaningful integration, such as sensitivities related to information sharing and technology theft. Some Western defense experts have questioned the U.S. Navy’s invitation for the PLAN to participate in the historic 2014 RIMPAC exercises and other joint maritime cooperation activities for such reasons.⁷⁸

These concerns notwithstanding, China’s antipiracy operations over the past several years have made meaningful contributions to Gulf of Aden security. In addition, they have achieved unprecedented coordination between China and other antipiracy maritime forces in the region, such as those of the United States. While suspicions abound regarding China’s motives, antipiracy cooperation may contribute to more positive outside perceptions of China and its international status. China has been “ready to exchange information and cooperate with the warships of other countries in fighting Somalian pirates” since its inaugural deployment in 2008.⁷⁹ One PLAN antipiracy task force commander, Admiral Du Jingcheng, has recalled that he was eager to “facilitate exchanges of information with escort naval vessels from other countries.”⁸⁰

In the nearly six-year period beginning December 2008, the PLAN has coordinated information with over twenty nations, including the United States.⁸¹ Li Faxin, associate professor (and lieutenant commander) at the Naval Marine Corps College, states that PLAN antipiracy forces have established “high-trust partner relations” (高度信任的伙伴关系) with many nations operating in the Gulf of Aden.⁸²

Positive results have also been facilitated by Shared Awareness and Deconfliction (SHADE), a voluntary multistate antipiracy information-sharing mechanism. SHADE meetings occur quarterly in Bahrain and regularly host naval and industry leaders from various states. Willingness on the part of independent navies, China’s in particular, to synchronize their antipiracy operations with those of Western forces within the SHADE mechanism is a historic achievement for twenty-first-century maritime commons governance.

China was denied SHADE chairmanship in 2009 but, notwithstanding, coordinates its antipiracy escorts with those of other SHADE members. For example, China has participated in SHADE’s Convoy Coordination Working Group and coordinates its monthly escort schedules with other navies providing independent escorts. China, India, and Japan reportedly began coordinating their antipiracy operations as early as 2011.⁸³ They mutually arranged escort schedules twenty-nine times between January and March 2012, with China acting as the coordinator for ten escorts, India for ten, and Japan for nine.⁸⁴

For six years the PLAN’s antipiracy operations in the Gulf of Aden have symbolized China’s burgeoning out-of-area naval activity. They also showcase Beijing’s growing ability to achieve soft-power objectives while concurrently promoting its overseas interests and military development. Important components of these missions include escort of commercial ships, navy-to-navy meetings, participation in multistakeholder dialogues on antipiracy operations, and, most significantly, the growing number of port visits undertaken by PLAN warships. These position the PLAN as an important and highly visible player in China’s recent soft-power diplomacy.

China’s ongoing antipiracy operations in the far seas have generated many positive assessments. In contrast to the contentious near seas, where Beijing is consistently embroiled in sovereignty disputes that show no signs of abating, antipiracy missions represent the most significant positive component of China’s naval engagement to date, particularly with regard to the degree to which Chinese vessels and sailors are interacting with the outside world. This interaction not only enhances China’s maritime image in the eyes of its antipiracy partners but may help alleviate fears that China’s naval rise might one day threaten twenty-first-century maritime prosperity in regions beyond the near seas. The United

States and China reportedly planned over forty visits, exchanges, and other engagements for 2013, double the number in the previous year, and successfully carried out joint antipiracy exercises in 2012 and 2013.⁸⁵ In July–August 2014, China participated in RIMPAC for the first time, the U.S.-hosted forum that is currently the largest naval exercise in the world.⁸⁶ There, four PLAN vessels drilled with international counterparts off Hawaii, on such subjects as antipiracy.⁸⁷

China has received well-deserved credit for helping to reduce piracy dramatically in the Gulf of Aden. In 2007–2008, as Admiral Wu told one of the authors, the area suffered about a hundred pirate attacks annually, of which between fifty and sixty “hijackings” (piratings) were successful. In 2014, by contrast, there were only seventeen attacks through September, none successful. China’s contribution entailed “major costs in forces, human resources, and money.” Admiral Wu continued, “The U.S. Navy and other top-level U.S. leaders are very happy that this is continuing. They are satisfied that China expends significant resources to make a contribution,” thereby reducing the resource burden on the United States. “There are just some members of Congress who remain opposed to the missions.” Admiral Wu added that he wants to invite U.S. congressional representatives to PLAN ships in the Gulf of Aden.⁸⁸

The PLAN’s experience fighting piracy in distant seas is thus a benchmark that can be used by Beijing to cement its positive image in the international arena. Antipiracy operations prove that the PLAN can be a provider—not merely a consumer or, worse, a disrupter—of maritime commons security. International society largely perceives Chinese naval contributions to fighting piracy as positive developments, perceptions that stand in sharp contrast to China’s hard-power naval approaches in the East and South China Seas. Scholars constantly scrutinize the nature and perceived efficacy of China’s soft power.⁸⁹ While it is too early to speculate exactly how Beijing’s contributions to antipiracy today will bolster its future soft-power influence, the results should be at least moderately positive. More generally, the Gulf of Aden case suggests that China will continue to reap international political benefits commensurate with its contributions to international maritime security.

NOTES

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1. “舰在亚丁湾今晚央八启航 钟雷演绎侠骨柔情” [“In the Gulf of Aden” Sets Sail from CCTV Tonight: Zhong Lei Plays Chivalrous Role], 新华社 [Xinhua News Agency], 3

September 2014, news.xinhuanet.com/.

CCTV-8 is China's state television drama channel, whose involvement indicates that a mass audience is being targeted.

2. Each PLAN vessel is organized into a command staff, which consists of the commander, political officer, and executive officer, plus various operational and administrative "branches" (部门). Each branch has a chief (部门长), and each branch chief serves as a duty officer when the vessel is in port or as a watch officer when the vessel is at sea. In the U.S. Navy, "branches" are called "departments," each of which has subordinate divisions. (The authors thank Ken Allen for his invaluable inputs concerning this and the following point.) Sun's position as a noncommissioned officer (NCO) offers one of many realistic, instructive examples in the series. He is a badly needed technical specialist in a navy working hard to emulate international "gold standards" but still in transition. Sun is forced to spend an additional six months in the Gulf of Aden when his equivalent in the next task force's Vessel 570 suddenly falls ill. While failure to fly out a relief may be a useful plot device to allow Sun's exuberant wife, Yang Ling'er, to open a Hunanese restaurant and play a central role in the Yulin Naval Base community that represents the program's "home front," it also suggests the PLAN's reliance on a still-small pool of NCOs. Sun's position results from a process in which the PLA began turning over more than seventy junior-officer billets, including some on vessels, to NCOs in 2004. These "acting" (代理) NCOs are filling officer billets up to the company-leader-grade level (正连制), which should technically be assigned to officers. As the number of NCOs has increased, one vessel squadron (大队) pioneered creation of an "NCO leader" system (士官长制度). Each vessel holds a meeting of all personnel to select three third-grade NCOs as "NCO leaders" on the basis of their political qualities, management capabilities, and prestige within the crew. Once they are selected, the NCOs are required to meet as a group once a week individually with the commanding officer, executive officer, and each branch chief for training on basic vessel knowledge. The NCOs are then to use this information as a basis for speaking with the other enlisted crew members. If the NCOs discover problems, they are to solve them. This is precisely the spirit that Sun exemplifies. 人民海军 [People's Navy], 3 June 2003, p. 2.
3. The first episode is available at 《舰在亚丁湾》01, www.youtube.com/. The series may be viewed at 舰在亚丁湾 (完结), www.youtube.com/.
4. The series is filmed in and around the Chinese military ports of Zhanjiang and Sanya, as well as the civilian port of Qinzhou. Shooting near Qinzhou during typhoon season allowed for depiction of high winds and waves (sea states 6–7). Eighteen advanced container-ships, bulk carriers, and various foreign vessels of ten thousand tons and above were mobilized. These and countless other details are documented in the "舰在亚丁湾" entry at baike.baidu.com/.
5. A less dramatic but still challenging and unpredictable rescue likely inspired this episode. In July 2012, twenty-six Chinese and foreign crew members from the Taiwan fishing vessel *Shiuh-fu 1* were released after 571 days' captivity in Somalia. Retrieving hostages from shore in high winds and with the possibility of pirate attack necessitated innovative special forces planning and preparations so that a helicopter could approach the wave-lashed beach and ferry individuals in five batches back to frigate *Changzhou*. 王志秋 [Wang Zhiqiu] and 侯瑞 [Hou Rui], "索马里海域大接护--十二批护航编队常州舰接护'旭富一号'渔船船员纪实" [Big Escort Pickup in the Gulf of Aden: Real Account of the Twelfth Naval Escort Task Force Changzhou Warship's Pickup and Escort of "Shiuh-fu 1" Fishing Boat Crew Members], 综合新闻 [General News], 人民海军 [People's Navy], 25 July 2012, p. 3.
6. "17th and 18th Chinese Escort Taskforces Meet in Gulf of Aden," *Liberation Army Daily*, 20 August 2014, eng.mod.gov.cn/; "18th Chinese Naval Escort Taskforce Sets Sail," *China Military Online*, 4 August 2014, eng.chinamil.com.cn/; "中国海军护航编队执行第700批护航任务" [Chinese Naval Escort Task Force Carries Out 700th Escort Mission], 中国新闻社 [China News Service], 5 April 2014, www.chinanews.com/.
7. Adm. Wu Shengli, discussion with author and small group of Harvard administrators, faculty, and students at Wadsworth House,

- Harvard University, 20 September 2014 [hereafter "Adm. Wu Shengli, discussion with author"].
8. Japan's unprecedented contribution, enabled by its historic reinterpretation of its constitution, will be more impressive to Western navies than China's well-established efforts in critical respects, given the JMSDF's willingness and ability to integrate directly with the other forces and (at least by sensitive Chinese standards) assume operational command over them. "Japan to Send SDF Officer to Take Command of Int'l Antipiracy Force," *Kyodo News International*, 18 July 2014, www.globalpost.com/.
 9. 陈国全 [Chen Guoquan] and 张新 [Zhang Xin], "海军将继续派兵护航" [Navy Will Continue to Send Troops to Escort], *解放军报* [Liberation Army Daily], 27 December 2013, mil.news.sina.com.cn/.
 10. Adm. Wu Shengli, discussion with author.
 11. Xinhua, *China Daily*, *Global Times*, and CCTV have been the primary providers of English-language information on PLAN antipiracy operations in the Gulf of Aden. For a representative article, see Zhao Shengnan, "Navy Protects Ships from Pirates," *China Daily*, 29 December 2012, usa.chinadaily.com.cn/.
 12. "4艘香港货船申请解放军护航3艘被劫商船2艘已获释" [4 Hong Kong Cargo Ships Apply for People's Liberation Army Escorts, 3 Vessels Have Already Been Hijacked, 2 Vessels Have Already Been Released], 人民网--港澳频道 [People's Net: Hong Kong & Macau Channel], 1 January 2009, hm.people.com.cn/.
 13. China Ministry of National Defense News Conference, 23 December 2008, available at military.people.com.cn/ and www.gov.cn/.
 14. Erik Lin-Greenberg, "Dragon Boats: Assessing China's Anti-piracy Operations in the Gulf of Aden," *Defense and Security Analysis* 26, no. 2 (2010), pp. 213–30.
 15. Wu Jiao and Peng Kuang, "Sailing to Strengthen Global Security," *China Daily*, 26 December 2008, www.chinadaily.com.cn/.
 16. 吴超 [Wu Chao] and 李大光 [Li Daguang], "海上运输线事关中国发展" [Maritime Shipping Lanes Related to China's Development], 海洋热点 [Ocean Hot Spots (section)], 当代海军 [Modern Navy] (October 2011), p. 51.
 17. China's dependence on imports as a proportion of total oil consumption had reportedly risen above 55 percent during 2011. See "Experts Warn of China's Rising Imported Oil Dependence," 新华社 [Xinhua News Agency], 14 August 2011, news.xinhuanet.com/.
 18. See "到2030年中国进口石油依存度将达到80%" [China's Oil Import Dependence Will Increase to 80 Percent by 2030], 中国资本证券网 [China Capital Securities Net], 24 September 2011, money.163.com/.
 19. "10% of GDP Now Comes from Sea, Says Report," *China Daily*, 10 April 2007, www.chinadaily.com.cn/.
 20. 徐菁菁 [Xu Jingjing], "我们为什么要护航--专访交通运输部国际合作司司长局成志" [Why We Want to Escort: Interview with Ju Chengzhi, Head of the Ministry of Transportation's International Cooperation Department], 三联生活周刊 [Sanlian Life Weekly], no. 3, 19 January 2009, pp. 92–95, www.zsnews.cn/.
 21. Yang Jingjie, "Captains Courageous," *Global Times*, 24 December 2012, www.globaltimes.cn/.
 22. 韩旭东 [Han Xudong], "制定国家海洋运输安全战略" [Formulate National Maritime Transportation Security Strategy], 瞭望新闻周刊 [Outlook Weekly] 14, 4 April 2011, p. 2, www.zaobao.com.sg/. Original text: "从目前形势看,海洋生命线已成为我国战略安全中的软肋。这主要是因为:一是过度依赖外轮进行海外运输"
 23. Xu Jingjing, "Why We Want to Escort."
 24. "China Overtakes S Korea as World's Largest Shipbuilder," *People's Daily Online*, 20 January 2011, english.people.com.cn/.
 25. "Blue Economy Becomes New Growth Engine for E China," Xinhua, 22 July 2013, english.peopledaily.com.cn/; Wan Jianmin, "从'沿海'走向'远海'" [From "Littoral Seas" to "Far Seas"], *经济日报* [Economic Times], 19 August 2011, cpc.people.com.cn/.
 26. "网友:支持中国海军护航树起大国形象" [Netizens: Support Chinese Naval Escorts Establishing the Image of a Great Power], 人民网 [People's Net], 24 December 2008, military.people.com.cn/.

27. 黄立 [Huang Li], 剑指亚丁湾: 中国海军远洋亮剑 [Sword Pointed at the Gulf of Aden: The Chinese Navy's Bright Far-Oceans Sword] (Guangzhou: 中山大学出版社 [Zhongshan Univ. Press], 2009), p. 169.
28. 顾国良 [Gu Guoliang], “中美关系的积极发展” [The Positive Development of Sino-U.S. Relations], 学习时报 [Study Times], 19 April 2006, www.china.com.cn/.
29. Yang Jingjie, “Captains Courageous.”
30. For documentation of logistical advances to support such efforts, see Ding Yubao, “Appendectomy Done for Artilleryman on Chinese Naval Escort Warship,” *Liberation Army Daily*, 13 August 2014, eng.chinamil.com.cn/. For how the operations test PLAN personnel and platforms, see “对话尹卓, 护航是划时代标志性事件” [Conversation with Yin Zhuo: Escorts Are an Epoch-Making Event], 当代海军 [Modern Navy], no. 12 (December 2011), p. 22. For advances in food preservation, see “Pelagic [Open Sea] Support Tested by Routinized Escort Mission,” 军事报道 [Military Report], *CCTV-7 (Mandarin)*, 24 December 2010. For civil-military logistics coordination, see Yang Jingjie, “Captains Courageous.”
31. Navy Press (海军出版社) has also supported PLAN participation in joint international naval exercises and long-distance navigation (远海航行). Established in January 1986 under the PLAN Political Department, it chiefly publishes charts, tables, books, monographs, translations, and scientific and other materials on naval and nautical topics. In late June 2014, the press published new hard- and soft-copy nautical charts that cover the world's major sea areas. Previously, Chinese military and civilian ships had had to rely on foreign-published nautical charts in some overseas areas. As part of informatized support and services, the press established a global electronic nautical chart database providing real-time long-distance maritime geographic information and products at all times and under all circumstances. In October 2011 the press began to provide free soft-copy nautical charts for Chinese ships conducting official business. It also furnished local oceangoing vessels with timely, precise maritime geographic information. 成帅 [Cheng Shuai], “海图保障覆盖全球重要海域--我国船舶告别在部分国外海域依赖外版海图航行的历史” [Nautical Chart Support Covers Important Global Sea Areas: Chinese Ships End Their Historical Reliance on Foreign-Published Nautical Charts for Navigating Portions of Overseas Waters], 人民海军 [People's Navy], 4 July 2014, p. 1; “China's Nautical Charts Cover Main Waters around the World,” *Liberation Army Daily*, 30 June 2014, eng.chinamil.com.cn/.
32. “PLA Navy to Send 11th Batch of Escort Fleets to Somali Waters,” *CCTV News Content (English and Mandarin)*, 24 February 2012, newscontent.cctv.com/.
33. “杜景臣任海军副司令员” [Du Jingchen Appointed PLA Naval Deputy Commander], 文汇报 [Wenhui News], 2 August 2014, news.wenweipo.com/.
34. “中国海军赴索马里军舰雷达系统世界领先” [Satellite System of Chinese Navy Warship Going to Somalia a World Leader], 3 March 2009, mil.news.sina.com.cn/.
35. Susanne Kamerling and Frans-Paul van der Putten, “An Overseas Naval Presence without Overseas Bases: China's Counter-piracy Operation in the Gulf of Aden,” *Current Chinese Affairs* 40, no. 4 (2011), pp. 119–46.
36. 孙自法 [Sun Zifa], “中国海军护航编队将以三种行动方式护航” [Chinese Navy Escort Fleet to Adopt Three Modes of Action in Escort], 中国新闻社 [China News Service], 3 January 2009; 责任编辑: 付志伟 [Responsible Editor: Fu Zhiwei], “中国护航编队将在任务海区设7个巡逻区” [China's Escort Fleet Will Set Up Seven Patrol Zones in the Sea Area to Which It Is Tasked], 中国新闻社 [China News Service], 4 January 2009, news.xinhuanet.com/.
37. “PLA Navy's Escort Formations Continuously Improve Their Pelagic [Open Sea] Escort Capabilities through Practice in Live Situation,” 军事报道 [Military Report], *CCTV-7 (Mandarin)*, 1130 GMT, 26 December 2011.
38. Sun Zifa, “Chinese Navy Escort Fleet to Adopt Three Modes of Action in Escort”; Fu Zhiwei, “China's Escort Fleet Will Set Up Seven Patrol Zones.”
39. Yang Jingjie, “Captains Courageous.”
40. Sun Zifa, “Chinese Navy Escort Fleet to Adopt Three Modes of Action in Escort”; Fu Zhiwei, “China's Escort Fleet Will Set Up Seven Patrol Zones.”

41. 李建文 [Li Jianwen], “为了黄金航道的和谐平安: 写在海军护航编队护送中外商船总数突破 3000 艘之际” [For the Harmony and Safety of the Golden Waterway: Written at the Time of the 3000th Escort Breakthrough by Naval Escort Task Forces of Chinese and Foreign Ships], 解放军报 [Liberation Army Daily], 4 December 2010, p. 4, www.chinamil.com.cn/.
42. “Number of Ships Escorted by Chinese Naval Escort Task Forces Hits 4,000,” *Liberation Army Daily*, 19 July 2011, eng.chinamil.com.cn/.
43. Zhao Shengnan, “Navy Protects Ships from Pirates.”
44. 王智涛 [Wang Zhitao] and 侯瑞 [Hou Rui], “走向深蓝的新里程--写在中国海军护航编队护送中外商船总数突破4000艘之际” [A New Course for Moving toward Deep Blue: Written at the Time of the 4,000th Escort of Chinese and Foreign Ships by the Chinese Naval Escort Task Forces], 海军军事 [Naval Military Affairs (section)], 人民海军 [People’s Navy], 19 July 2011, p. 4.
45. Cao Jinping and Mo Xiaoliang, “Review of Chinese Navy’s Escort Missions in Gulf of Aden in Past 4 Years,” *People’s Daily*, 27 December 2012, english.peopledaily.com.cn/.
46. Zhao Shengnan, “Navy Protects Ships from Pirates.”
47. Cheng Bijie and Hou Rui, “Mercury Net Boosts Exchange between Chinese and Foreign Escort Task Forces,” *Liberation Army Daily*, 13 November 2012, eng.chinamil.com.cn/.
48. 刘炎迅 [Liu Yanxun], 陈晓舒 [Chen Xiaoshu], 王婧 [Wang Jing], 何婧 [He Jing], 李郝然 [Li Haoran], and 姚忆江 [Yao Yijiang], “远征索马里背后: 中国海军挺进‘深蓝’” [Background of Expedition to Somalia: Chinese Navy Pushes Forward to Blue Water (lit., “Deep Blue”)], 中国新闻周刊 [China News Weekly], no. 403, 5 January 2009, pp. 22–27.
49. 孙彦新 [Sun Yanxin] and 朱鸿亮 [Zhu Hongliang], “中国海军首批护航编队开创人民海军历史上多个‘第一’” [Chinese Naval First Escort Task Force Achieves Multiple “Firsts” in History of People’s Navy], *Xinhua*, 28 April 2009, news.xinhuanet.com/.
50. Michael McDevitt, “PLA Naval Exercises with International Partners,” in *Learning by Doing: The PLA Trains at Home and Abroad*, ed. Roy Kamphausen, David Lai, and Travis Tanner (Carlisle, Pa.: Army War College Press, 2012), pp. 81–125.
51. “NATO Flagship Welcomes Chinese Naval Task Force Commander,” news release, *Allied Maritime Command Headquarters*, 28 March 2011, www.manw.nato.int/; Liu Yiwei and Tang Shifeng, “CTF-151 Commander Visits 8th Chinese Naval Escort Task Force,” *Liberation Army Daily*, 9 May 2011, eng.mod.gov.cn/; “EU NAVFOR Force Commander Meets CTF 526 in Salalah,” *EU NAVFOR Public Affairs Office*, 27 June 2011, www.eunavfor.eu/.
52. 张鑫鑫 [Zhang Xinxin] and 余黄伟 [Yu Huangwei], “我护航编队与新加坡护航编队互访” [Chinese and Singaporean Escort Task Forces Exchange Visits], 人民海军 [People’s Navy], 28 September 2010, p. 1.
53. “Chinese Escort Taskforce Commanding Officer Meets with Singaporean Counterpart,” *Liberation Army Daily*, 11 June 2014, eng.chinamil.com.cn/.
54. 吴德春 [Wu Dechun], 胡全福 [Hu Quanfu], and 米晋国 [Mi Jinguo], “第十一批护航编队与美盟151编队指挥官非正式互访” [Commanders of Eleventh Escort Task Force and CTF-151 Hold Informal Exchanges], 人民海军 [People’s Navy], 13 July 2012, p. 1; 陈典宏 [Chen Dianhong] and 米晋国 [Mi Jinguo], “第十一批护航指挥员与北约508特混编队指挥官会面交流” [Commanders of Eleventh Escort Task Force and NATO 508 Special Forces Hold Exchanges], 人民海军 [People’s Navy], 18 July 2012, p. 1.
55. Cao Jinping and Mo Xiaoliang, “Review of Chinese Navy’s Escort Missions.”
56. “China-Europe Navies Conduct Joint Anti-piracy Drill,” *Liberation Army Daily*, 16 July 2014, eng.chinamil.com.cn/.
57. For an interview on the exercise hosted by Li Jie, see 李杰 [Li Jie], “中俄联合护航行动意义非凡” [Sino-Russian Joint Escort Operations Have Profound Meaning], 海上争鸣 [Maritime Schools of Thought Contending (section)], 当代海军 [Modern Navy] (November 2009), pp. 56–58. See also 姚子宝 [Yao Zibao], 余晶俊 [Yu Jingjun], and 张庆宝 [Zhang Qingbao], “和平蓝盾—2009透视:

- 中俄护航编队联合军演” [Perspectives on Peace Blue Shield—2009 Sino-Russian Escort Task Forces Joint Military Exercises], 海天看点 [Maritime Points (section)], 当代海军 [Modern Navy] (April 2010), pp. 28–33.
58. 王智涛 [Wang Zhitao] and 侯瑞 [Hou Rui], “海军举行‘蓝盾11突击-2011A’演练: 旨在为日后营救我被海盗劫持商船奠定基础” [Navy Holds “Blue Shield Assault—2011A”: Exercise to Lay Foundation for Future Rescue of Our Merchant Ships Hijacked by Pirates], 人民海军 [People’s Navy], 11 May 2011, p. 1.
 59. 张庆宝 [Zhang Qingbao], 梁庆松 [Liang Qingsong], and 钱宏 [Qian Hong], “演习科目精彩纷呈 演习取得重要成果 中俄联演海上实兵演习捷报频传” [The Exercise Subjects Are Splendid and Varied, the Exercise Has Produced Important Results: News of Success Keeps Pouring In during the Maritime Actual-Troop Exercise of the China-Russia Joint Exercise], 人民海军 [People’s Navy], 27 April 2012, p. 1; “Maritime Cooperation—2012’ Sino-Russian Military Exercise: Main Highlights,” 军事报道 [Military Report], CCTV-7 (Mandarin), 1130 GMT, 23 April 2012.
 60. 蔡年迟 [Cai Nianchi], “远洋突击, 我们历练了什么, 人民海军执行护航任务两周军回眸〈二〉” [Far Oceans Sudden Attacks, What Have We Experienced and Practiced? A Military Retrospective on the Last Two Weeks of the Chinese Navy’s Escort Mission (Part 2)], 人民海军 [People’s Navy], 22 December 2010, p. 1.
 61. Cao Jinping and Mo Xiaoliang, “Review of Chinese Navy’s Escort Missions.”
 62. “China, Pakistan Navy Conduct First Joint Anti-piracy Drill off Somali Coast,” *Naval Today*, 2 May 2011, navaltoday.com/.
 63. “Peace-11’ Multinational Joint Maritime Military Exercise Begins,” 军事报道 [Military Report], CCTV-7 (Mandarin), 8 March 2011.
 64. “Chinese Naval Escort Task Force Berths at Port of Karachi for Supply and Rest,” *Liberation Army Daily*, 10 September 2012, eng.mod.gov.cn/.
 65. “Chinese Navy and Royal Australian Navy Share Counter-piracy Lessons,” *Australian Government Department of Defence*, 20 December 2012, news.defence.gov.au/.
 66. “China’s Anti-pirate Fleet Returns from Somali Waters,” Xinhua, 23 January 2014, news.xinhuanet.com/.
 67. “Chinese Navy Wraps Up Escort Mission for Syria’s Chemical Weapons,” *Liberation Army Daily*, 25 June 2014, eng.chinamil.com.cn/.
 68. “16th Chinese Naval Escort Taskforce Returns,” *Liberation Army Daily*, 21 July 2014, eng.chinamil.com.cn/; “Chinese Navy Fleet Ends Visit to Namibia,” Xinhua, 13 June 2014.
 69. “Chinese Naval Fleet Pays Four-Day Goodwill Visit to Cameroon,” *People’s Daily Online*, 4 June 2014, english.peopledaily.com.cn/; Sun Zhao and Huang Jin, eds., “China-Cameroon Navies Conduct ‘Anti-piracy’ Exercises on 2 June 2014,” *People’s Daily Online*, 4 June 2014, english.peopledaily.com.cn/; “China and Namibia Hold Joint Naval Drills,” Xinhua, 10 June 2014, news.xinhuanet.com/; “Chinese and Nigerian Navies Conduct First Anti-piracy Joint Drill,” *China Military Online*, 29 May 2014, eng.mod.gov.cn/.
 70. Cao Jinping and Mo Xiaoliang, “Review of Chinese Navy’s Escort Missions.”
 71. “African Officials Study Maritime Law Enforcement in China,” *People’s Daily*, 11 May 2011, english.people.com.cn/.
 72. “PLA Navy Sends Forces to Somalia to Fight Piracy in Gulf of Aden,” *CCTV News (English)*, 1223 GMT, 27 February 2012.
 73. Wang Yizhou, *Creative Involvement: The Evolution of China’s Global Role* (Beijing: Peking Univ. Press, August 2013), English excerpt in *China 3.0*, ed. Mark Leonard ([London]: European Council on Foreign Relations, November 2012), ecfre.eu/.
 74. Andrew S. Erickson and Austin M. Strange, *No Substitute for Experience: Chinese Anti-piracy Operations in the Gulf of Aden*, China Maritime Study 10 (Newport, R.I.: Naval War College Press for the China Maritime Studies Institute, November 2013), available at www.usnwc.edu/.
 75. For Malaysian Airlines Flight 370, “17th Chinese Naval Escort Taskforce Departs,” *China Military Online*, 25 March 2014, eng.mod.gov.cn/. For Syrian chemicals, “Foreign Ministry Spokesperson Qin Gang’s Regular Press Conference on April 25, 2014,” *Ministry of Foreign Affairs of the People’s Republic of China*, 25 April 2014, www.fmprc.gov.cn/.

76. "The New Masters and Commanders," *Economist*, 8 June 2013.
77. 钟婷婷 [Zhong Tingting] and 王学军 [Wang Xuejun], "论中国对非洲的软实力外交" [On China's Soft-Power Diplomacy toward Africa], *浙江师范大学学报 (社会科学版)* [Journal of Zhejiang Normal University (Social Sciences)] 35, no. 4 (2010), waas.cass.cn/.
78. Dean Cheng, "Countering China's A2/AD Challenge," *National Interest*, 20 September 2013.
79. "Warships to Set Off on Friday for Somalia Pirates," *China Radio International*, 23 December 2008, english.cri.cn/.
80. Bai Ruixue and Zhu Hongliang, "Commander of the Chinese Flotilla for Escort Missions Says: At Present, the Flotilla Does Not Have a Disembarkation Plan," *Xinhua*, 26 December 2008.
81. "Commander of Chinese Naval Escort Task Force Visits U.S. Guided-Missile Cruiser *Chosin*," *Liberation Army Daily*, 23 November 2009, eng.mod.gov.cn/; "美国151特混编队指挥官访问'舟山'舰" [U.S. CTF 151 Commander Visits "Zhoushan"], *Xinhua*, 2 November 2009, news.xinhuanet.com/.
82. 李发新 [Li Faxin], "第四章: 中国海军护航交流与合作" [Chapter 4: Chinese Naval Escort Exchanges and Cooperation], in *中国海军与海上护航行动* [China's Navy and Maritime Escort Operations] (Beijing: 五洲传播出版社 [China Intercontinental Press], 2013), pp. 87–110.
83. "Indian, Chinese Navies Unite to Tackle Piracy," *Times of India*, 2 February 2012, articles.timesofindia.indiatimes.com/. Japan and China initially agreed to coordinate escorts in March 2009; "Japan, China to Coordinate Moves on Antipiracy Missions off Somalia," *People's Daily Online*, 12 May 2011, english.people.com.cn/.
84. 冯春梅 [Feng Chunmei] and 孝金波 [Xiao Jinbo], "国防部举行例行记者会, 回答海军护航、航母平台、网络黑客攻击等问题: 中印日护航形成统一有序班期" [Ministry of National Defense Holds Routine Press Conference, Answers Questions on Naval Escorts, Carrier Platforms, and Network Hacker Attacks: China, India and Japan Escorts Have Formed Unified Coordinated Schedules], *人民日报* [People's Daily], 30 March 2012, news.163.com/.
85. David Alexander, "China Navy Chief Says Operational Aircraft Carrier a Few Years Away," *Reuters*, 12 September 2013, www.reuters.com/.
86. For analysis of China's participation, see Andrew S. Erickson and Emily de La Bruyère, "China's RIMPAC Maritime-Surveillance Gambit," *National Interest*, 29 July 2014, and Andrew S. Erickson and Austin M. Strange, "China's RIMPAC Debut: What's in It for America?," *National Interest*, 3 July 2014.
87. "Chinese Naval Taskforce Shifts to Maritime Exercise Phase of RIMPAC," *Liberation Army Daily*, 11 July 2014, eng.mod.gov.cn/; Ding Ying, "Taking Part at Sea," *Beijing Review*, 5 July 2014, www.bjreview.com.cn/; "Focus Today," *CCTV-4 (Mandarin)*, 1330–1400 GMT, 3 July 2014.
88. Adm. Wu Shengli, discussion with author.
89. Joseph Nye, "Soft Power," *Foreign Policy*, no. 80 (Autumn 1990), pp. 153–71; Trefor Moss, "Soft Power? China Has Plenty," *Diplomat*, 4 June 2013.

THE ANATOMY OF GULF OF GUINEA PIRACY

Commander Ali Kamal-Deen, Ghana Navy

As a global response to piracy off the coast of Somalia was taking place, alarm bells were ringing about a similar growing insecurity in the Gulf of Guinea. Today, the Gulf of Guinea stands as the most dangerous maritime area in terms of the success rate of attacks and violence. The United Nations Security Council adopted Resolutions 2018 (in 2011) and 2039 (in 2012) expressing grave concern about the mounting insecurity in the region and its consequences for regional and global security.¹ A United Nations (UN) team was deployed to the region to assess the situation.²

The UN resolutions and the report of the assessment team called on regional states and institutions, as well as the international community, to respond, and

Commander Ali Kamal-Deen is the Director of Research at the Ghana Armed Forces Command and Staff College, with additional responsibility as the Legal Director of the Ghana Navy. He has previously served in various appointments in the Ghana Armed Forces, including deployments to Sierra Leone and the Democratic Republic of the Congo on peacekeeping missions in 2003 and 2007, respectively. He is a Fellow of the Africa Security Dialogue and Research Network, a Fellow of the Australian National Centre for Ocean Resources and Security, and an Associate of the Corbett Centre for Maritime Policy, in the United Kingdom. Commander Kamal-Deen holds a doctor of philosophy degree from the University of Wollongong, Australia. He also holds a master of law degree in international maritime law and master of arts in international relations.

a code of conduct for the repression of piracy was adopted by Gulf of Guinea states in June 2013 at Yaoundé, Cameroon, with wide international support.³ Nevertheless, piracy in the Gulf of Guinea region remains a serious threat. Indeed, in the month following the adoption of the code of conduct a Maltese-flagged vessel, *Cotton*, was hijacked off the coast of Gabon, the first attack of its kind along that coast, portending a widening of the piracy threat southward.⁴ It is also noteworthy that at the close of 2013 the Gulf of Guinea recorded more incidents of attacks on the high seas than in previous years.⁵ This deepening threat has continued into 2014, as Angola and Ghana registered their first significant hijackings (analyzed below). These

developments reinforce the urgency of effective counterpiracy measures. Realistically, however, the success and efficacy of both regional and global response will depend on a sound knowledge of the operational environment, awareness of the actors, and most crucially, understanding of how the situation has evolved.

This article provides a critical analysis of the piracy situation in the Gulf of Guinea. It sets the background with an overview of piracy statistics and a categorization of the coast according to the degree of risk of attack. This is followed by an examination of the paradigm of Gulf of Guinea piracy, while the third section analyzes the evolution of the piracy from its pre-2005 low levels into a regional and global threat. The fourth section summarizes Gulf of Guinea piracy and examines future projections. The article concludes with a discussion of the imperatives for enhancing maritime security in the Gulf of Guinea. It should be noted first that the geographical scope of the region referred to as the Gulf of Guinea varies depending on the issue or interest at stake. It is defined in this article as comprising the coastal states stretching from Senegal to Angola and as embracing the Economic Community of West African States (ECOWAS) and the Economic Community of Central African States (ECCAS).⁶

OVERVIEW AND DISTRIBUTION OF GULF OF GUINEA PIRACY INCIDENTS

Piracy has historically been a threat to maritime trade and the good order of the world's oceans.⁷ To ensure the security of sea lines of communication (SLOCs), international law imposes an obligation on states to cooperate in the repression of piracy; it also grants universal jurisdiction over piracy, such that pirates may be arrested and prosecuted within the legal system of any state.⁸ The requisite international framework is codified in articles 100–105 of the United Nations Convention on the Law of the Sea (UNCLOS), of 1982.⁹

To be classified as piracy, an act of piracy or depredation must have taken place on the high seas.¹⁰ The “high seas” in this context include contiguous zones and exclusive economic zones. In contrast to piracy, the terms “armed robbery against ships,” “armed robbery at sea,” or simply “armed robbery” denote piratical acts or thefts that take place within a territorial sea, internal waters, or, by extension, archipelagic waters, ports, and anchorages.¹¹ For practical purposes, however, piracy and armed robbery pose similar threats to the safety and security of global shipping, and the drivers and motivations behind the two crimes are largely the same despite the legal distinction.¹² For this reason “piracy” is used in this article to cover both types of incidents.

Piracy Statistics in the Gulf of Guinea

Although the Gulf of Guinea has its own history of sea raids and piratical acts, they did not constitute a major threat until recently.¹³ Within the past few years

the region has seen a significant rise in piracy incidents. Table 1 reflects incidents from 2005 to 2013, as compiled from International Maritime Organization (IMO) reports.¹⁴

The rising threat of piracy is evident. Attacks went from twenty-three in 2005 to sixty in 2007. For reasons that will be covered below, the incidents decreased in 2008 and 2009, but they swelled again between 2010 and 2013; 2012 marked a peak, with sixty-four incidents. The situation is actually worse than the statistics depict, because, it is believed, unlike in other regions, only about half of the incidents of piracy in the Gulf of Guinea are actually reported by ships' masters and operators for fear of reprisal during their next visit.¹⁵ Even so, since 2009 the Gulf of Guinea has been identified as the new piracy territory, displacing Somalia, especially with regard to violence employed in the attacks.¹⁶

Piracy constitutes a major threat to SLOC security when incidents are not confined to ports and anchorages but occur also in territorial waters and, more importantly, on the high seas. The Gulf of Guinea manifests all these indicators, and the percentage of successful attacks outside port areas has increased, as shown in table 1. Robberies and attempted robberies in the territorial sea rose from only five in 2005 to thirty-one incidents in 2007. The region recorded a single incident on the high seas in 2005; the number jumped tenfold the following year, and the number of successful attacks on the high seas has since grown. As early as 2006, pirates hijacked a Russian oil tanker, *Shkotovo*, about sixty nautical miles off Guinea using automatic rifles and rocket-propelled grenades (RPGs), manifesting their ability to hijack vessels far out to sea and their willingness to employ high levels of violence.¹⁷ Significantly, seventeen out of the twenty-five high-seas attacks in 2012 were successful, and most attacks in 2013 were against moving vessels.

Piracy Hot Spots and Enclaves

Table 1 covers the entire Gulf of Guinea region, but two qualifications must be made. First, piracy and robbery incidents have not affected the entire region continually from 2005 to 2012. Second, even where incidents have been recorded, their nature and trends are not monolithic. To allow a nuanced perception of the dynamics of the problem, localities in the Gulf of Guinea can be categorized as "hot spots," "enclaves," or zones of low risk. Piracy hot spots are rated according to risk and danger of attacks, while enclaves—localities where pirates are based and from which they operate—are classified as primary or secondary, depending on the certainty of the presence of piratical groups.

Angola and Cape Verde are areas of low risk; there are hardly any reported incidents of attacks off their coasts, and the trends on the neighboring coasts are also limited—the hijacking of the tanker *Kerala* in February 2014 was the first major incident off Angola. Incidents in and around the Democratic Republic of

**TABLE 1
ACTS OF PIRACY AND ARMED ROBBERY COMMITTED (Y) AND ATTEMPTED (X)**

Description of Events	2005		2006		2007		2008		2009		2010		2011		2012		2013	
	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X
Beyond territorial sea	1		5	5	9	3	2	4	7	6	6	4	10	9	17	8	13	14
In territorial sea	4	1	8		26	5	17	1	19	4	15	4	15	5	9	6	5	1
In port area	16	1	13		17		23	3	8	2	16	2	19	3	19	5	16	5
Steaming/driftng ships	2		7		13		4		17		20		19		29		34	
	21	2	26	5	52	8	42	8	34	12	37	10	44	17	45	19	34	20
TOTAL	23		31		60		50		46		47		61		64		54	

the Congo, the Republic of the Congo, Gabon, Gambia, Ghana, Guinea-Bissau, Liberia, Sao Tome and Principe, and Senegal are also limited to theft from ships in ports and anchorages, as well as occasional robberies in territorial seas. Attacks off the coasts of Cameroon and Equatorial Guinea have declined substantially since 2009, thus removing these two states from a high-risk ranking.

Recent multiple attacks, in contrast, have made Cote d'Ivoire a piracy hot spot. Sierra Leone is in the same category, because although attacks off that coast are fewer than off Cote d'Ivoire, they are very violent.

Guinea is both a piracy hot spot and the region's secondary piracy enclave. Attacks off its coast since 2009 have been characterized by heavy use of weapons, violence, and sophistication. *Shkotovo* (as noted) and *Maersk Belfast* were attacked in 2006 with automatic rifles and RPGs;¹⁸ *Isola Verde* and *Songa Emerald* were successfully boarded while under way in 2009 and 2010, respectively;¹⁹ more recently, in 2012, armed pirates attacked the Maltese-flagged *Constanza* twenty nautical miles off Guinea, causing major damage to the ship.²⁰ It is the frequency and similarity of these attacks that suggest the existence of a piracy base in Guinea and its environs.

The coasts of Nigeria, Benin, and Togo are collectively the most dangerous in the region. However, Nigeria stands out as the epicenter of Gulf of Guinea piracy and as the primary piracy enclave. Nigeria alone accounts for 80 percent of reported incidents of piracy in the Gulf of Guinea.²¹

THE PARADIGM OF GULF OF GUINEA PIRACY

What fundamentally drives piracy, especially in its primary enclave? Who are the primary actors responsible? Answers can be traced in the transmutation of an insurgency into a ravaging piracy network.

The Movement for the Emancipation of the Niger Delta

The Movement for the Emancipation of the Niger Delta (MEND) is a loose coalition of militant groups that emerged in 2005 in the Niger Delta of Nigeria, ostensibly seeking a greater share of oil revenue for the region.²² A Joint Revolutionary Council surfaced in 2006 as an umbrella organization for MEND and other, splinter groups;²³ MEND is the most dominant and cohesive.²⁴ MEND claims to fight for "community" interests, but intense criminality dominates its practical existence and activities.²⁵ From its very inception, expatriate workers have been regularly kidnapped by MEND activists for ransom at each *okrika*—area or axis of control of a subunit or splinter group.²⁶

The MEND insurgency gained notoriety at the strategic level for attacks on critical installations in the Niger Delta, starting with oil pipelines ashore and later expanding to offshore oil platforms.²⁷ The federal government of Nigeria responded with the establishment of a joint task force of security agencies to

counter the insurgency. Despite the robustness of the joint task force, MEND continued to be lethal, engaging government forces in gun battles.²⁸ Three naval personnel were missing and feared dead in 2007, nine were killed in June 2008, and three in April 2009.²⁹

Rising Threat and the Amnesty Pact

In late 2008, after almost four years of insurgent attacks, the federal government of Nigeria entered into negotiations with MEND; a formal amnesty proclamation resulted in June 2009.³⁰ This rapprochement was influenced by the increasing threat posed by insurgents to oil security, as epitomized by a successful attack on the floating production, storage, and off-loading unit (FPSO) *Bonga* in 2008.³¹ The attack had serious implications for Nigeria, the wider Gulf of Guinea, and beyond. The *Bonga* attack marked a peak in a series of threats to energy security in the Gulf of Guinea, and it opened a new chapter in global asymmetric threats.

Indeed, excluding the attack on *Aban VII* off the coast of India in 2006, the Gulf of Guinea has recorded the most attacks against offshore platforms in the world, all of them off the coast of Nigeria.³² *Bulford Dolphin*, a mobile drilling rig, was attacked in April 2007 by insurgents.³³ In May 2007 *Mystras* was also attacked, and three days later *Trident VIII* was targeted.³⁴ In addition to the physical damage and personal injuries inflicted by the insurgents, these incidents impacted the operation of the platforms.³⁵ The attack on *Mystras* was indeed very significant, as it marked the second on an FPSO in two years.

These incidents boosted the confidence of the insurgents, and they culminated in the June 2008 attack on the *Bonga* FPSO—a major hub of the oil giant Royal Dutch Shell—about 120 kilometers offshore.³⁶ After the incident, Nigeria's oil production dropped to its lowest in twenty-five years and global oil prices soared.³⁷ The *Bonga* incident heightened global fears that even deep-sea energy installations were not safe from insurgents and terrorists.³⁸ In a statement MEND affirmed that its grand objective was to disable oil export operations, described the attack as a humiliating security breach for the Nigerian military, and warned that MEND's "next visit [would] be different."³⁹ Soon after, the Nigerian government and MEND group leaders came to the negotiation table and entered into an amnesty pact. The arrangement involved insurgents laying down their weapons in return for monthly allowances and skills training.⁴⁰ However, some commentators have charged that insurgent leaders were accommodated in luxurious hotels alongside high-ranking politicians and influential people and that the insurgent leadership was to receive financial payoffs.⁴¹

The amnesty led to the demobilization of insurgent forces and of the organizational structure of MEND, as well as a decline in its activities starting in late 2008.⁴² Interestingly, in that period piracy attacks in the Gulf of Guinea decreased,

from a high of sixty incidents in 2007 to fifty in 2008, reaching a low of forty-six in 2009 (as shown in table 1).⁴³ A review of piracy reports by the International Maritime Bureau (IMB) for 2009 and 2010 shows that there were few piratical incidents in the last and first quarters of 2009 and 2010, respectively.⁴⁴ However, the arrangement became tenuous thereafter, partly because the amnesty “cake” had not been shared among all actors (and certainly not in amounts satisfactory to all members of the insurgency).⁴⁵ Splinter groups announced an intention to resume normal campaigns, and in the remainder of 2010 piracy attacks became prevalent once again.⁴⁶ By the close of 2011 the Gulf of Guinea had recorded sixty-one piracy incidents, a sharp contrast to the low figures of 2009.

An Insurgency, Criminality, Piracy, and Security Complex

It is clear, then, that the creeks of the Niger Delta harbor dangerous pirates who threaten the security of sea lines of communication in the Gulf of Guinea. Elements of MEND that are no longer attacking offshore oil platforms, kidnapping offshore workers for ransom, or extorting money from oil companies have turned to piracy as their principal activity. This insurgency/piracy nexus often exists among different kinds of organized crime.⁴⁷ In the Gulf of Guinea, however, piracy is committed with impunity, and insurgents, rather than achieving a symbiotic relationship with pirates, have fully transformed into pirates themselves.

The crime of piracy is itself only part of a broad spectrum of actions and complexities that constitutes the piracy threat. It may, for instance, be argued that dealing with the Niger Delta piracy is a matter of trading off one element of security for another. At any point in time—this was especially so prior to the amnesty process—the Niger Delta insurgency poses a threat to five critical security interests: the national security of Nigeria, the investment security of oil companies, global energy security, regional security and stability, and finally, the safety and security of shipping. These five aspects of security are in many ways interlinked. Insurgent activities impact Nigeria’s economic interests and stability, which are key components of its national security. Insurgent attacks equally threaten the investment interests of oil companies, as well as global energy security, the safety and security of shipping, and regional stability. For Nigeria, safeguarding national security became paramount following such incidents as the *Bonga* attack, making the security of shipping a lesser concern. Oil companies initially secured their investments by succumbing to the extortion demands of insurgent groups.⁴⁸ The amnesty arrangement offered assurance, albeit temporary, of Nigerian national security, oil investment security, and by extension, the contribution of Nigeria’s oil to global energy security. But protecting those security interests left regional security and the security of shipping in peril. That peril may be regarded as unintended, or it can be viewed as Nigeria sacrificing one element of security interest

for the other; indeed, as far as the shipping industry was concerned, Nigeria has had “no political will to combat the problem of piracy.”⁴⁹

EVOLUTION OF THE NIGER DELTA INSURGENCY INTO A REGIONAL MARITIME SECURITY THREAT

The Niger Delta insurgency has evolved over time from the primary piracy enclave into a region-wide security threat, in scope, tactics, and trends. As in many criminal progressions, the exact dates of transitions are difficult to pinpoint but the patterns are discernible. What follows is a summary of the seven phases of the evolution from 2005 through to the hijacking of *Orfeas* in October 2012.

Opportunistic Sea Robbery

The first phase of Gulf of Guinea piratical attacks may be described as “opportunistic sea robbery.” This taxonomy fits piracy incidents up to 2005 but also applies in part as late as 2007. Two-thirds of attacks during this period took place in ports and anchorages, interspersed with a limited number of robberies in the territorial sea. It needs to be emphasized, though, that the description of this phase of piracy as “opportunistic” is not about the capability of the actors but highlights the fact that robberies were conducted as subsidiary activities. The attention of insurgents during this period was on attacking offshore platforms; some ships, however, were hijacked and crews kidnapped for ransom.

Piracy reports during this period gave indications of what would become central in the profile of threats to SLOC security—that is, gangs of hijackers using speedboats armed with heavy weapons. The use of speedboats can be contrasted with Somalia piracy, wherein fishing vessels and skiffs are the principal platforms. In 2006, four crew members of *Northern Comrade* were kidnapped for ransom. In May 2007, over forty people armed with guns in six speedboats attacked *Dlb Cheyenne*, engaged the Nigerian military in a shoot-out, and kidnapped the crew; in the same month *Oloibiri* was attacked using explosives and its crew kidnapped for ransom.⁵⁰ Thus the tactic of kidnapping and ransoming expatriate oil workers was being employed in conjunction with the hijacking of ships.

Widening the Enclave: Prodding and Surges

By 2009 there were signs of a new characteristic of piracy in the Gulf of Guinea. Unlike Somalia, where pirates set out to hunt for victim ships, pirates in the Gulf of Guinea undertake surgical attacks, converging at locations of interest.⁵¹ Activities of insurgents during this period expanded beyond the southern and western coasts of Nigeria, westerly swarms targeting vessels off the coast of Benin, and those to the south attacking ships off Cameroon and the neighboring coast. In 2008 about ten armed persons in military clothing boarded the cement carrier *Elbia* off the island of Bioko in Equatorial Guinea, identified themselves as

Nigerian rebels, demanded food from the ship's crew, and after six hours on board disembarked into speedboats. Accounts of piracy incidents off nearby coasts in 2008 described the pirates and robbers as "Nigerian rebels," "Nigerian militants," and "protectors of the Bonny River."⁵²

These surges signaled an ability of the insurgents to increase the intensity and extend the scope of their activities, with widening security consequences. This was demonstrated by the alleged involvement of Niger Delta insurgents in a sea-borne attack on the presidential palace of Equatorial Guinea in February 2009.⁵³ The incident was the catalyst for the establishment of a subregional maritime security framework by member states of the Economic Community of Central African States in 2009.⁵⁴ Despite the challenges confronting the ECCAS maritime framework (including inadequate logistics, funding, and legal framework), it nonetheless weakened the southern wing of the insurgents, resulting in fewer incidents in the southern Gulf of Guinea.

Pursuit and Violence

A further evolution of tactics became manifest in 2009 as the insurgents started hunting vessels to attack, albeit selectively, but often with great violence. Once a high-value target was identified, it was shadowed farther out to sea and at a vulnerable location was attacked violently. In February 2009 grenades were thrown at the oil tanker *Front Chief*, killing a crew member. Seamen on board *Emirates Swam*, *Sevastopolskaya Buhta*, and other vessels also suffered serious injuries during attacks the same year.⁵⁵ The high level of violence not only ensured quick outcomes but compensated for the absence of sanctuaries where vessels could be kept during ransom negotiations and moved the Gulf of Guinea toward the employment by pirates of violence and killing to subjugate theaters of operations.⁵⁶

Full-Scale Insurgent Piracy

The transition from insurgency into full-scale piracy was a post-amnesty phenomenon, following the withdrawal of insurgent elements from the amnesty deal of 2010. Attacks became more prevalent from 2010 through to 2013. They also became more brazen, as indicated by the chasing of and firing on *Elbtank Germany* for over an hour and the shadowing of *Cape Bon* for two days, in February and March 2011, respectively.⁵⁷

In this transformation pirates have developed new measures. A variant of the mother-ship concept has emerged wherein pirates use hijacked fishing vessels to store fuel for extended operations. That is similar to Somali methods, but in the Gulf of Guinea it is primarily a deception measure to get close to oil vessels. Pirates have targeted especially ships loaded with refined oil, which they always siphon into smaller tankers and then sell illegally, both within and outside the region.⁵⁸

Regional Threat and Piracy Networks: The Benin Case

That the threat of piracy had become regional by mid-2011 was made evident by multiple incidents off the coast of Benin. Piracy off the coast of Benin was by no means new, but unlike earlier cases the June–July 2011 attacks amounted to an invasion of Benin’s coastal space. The pirates of the Niger Delta had expanded their enclave to Benin.⁵⁹ Two significant trends emerged from the 2011 Benin attacks, the first of which defies normal risk analysis regarding the safety and security of ships. It is usual to assume that ships in port are shielded from violent piracy, and crews normally lower their security posture, expecting at most only minor robberies and minimal violence by actors from within the coastal state. This assumption was crushed when pirates of the Niger Delta actually entered port areas of Benin to hijack vessels. One ship, *Aristofanis*, was sailed to the open sea, where its cargo was discharged.⁶⁰

The second piracy trend that became apparent in the Benin onslaught was the emergence of a growing transnational criminal network in the Gulf of Guinea. This is evident from the hijacking of *Duzgit Venture*.⁶¹ The captain was forced to sail the vessel all the way to the coast of Gabon, where the pirates planned to transfer the oil into a barge. When the pirates failed to meet the barge, the captain was forced to sail off Warri, Nigeria, to lighten the cargo. After a series of unsuccessful attempts to do so, the pirates disembarked into fast boats, kidnapping the captain and another crew member. The pirates were in cahoots with other actors about four thousand kilometers away from the point of hijack, and to meet them they sailed the commandeered ship across the coastal waters of five states.⁶² The incident also raises serious question about the capability of Gulf of Guinea states to monitor their maritime domains.

Togo in the Claws: Post–Operation PROSPERITY

The multiple piracy attacks off the coast of Benin had a staggering economic impact on the country, including an estimated port-revenue loss of U.S.\$81 million in 2011.⁶³ The president of Benin took two diplomatic steps in response to the crisis. At the multilateral level, he requested the support of the international community, through the United Nations secretary-general.⁶⁴ Second, he sought the support of his counterpart in Nigeria.⁶⁵ In August 2011 the two states launched joint patrols; known as Operation PROSPERITY, they lasted a year and concentrated largely on the coast of Benin. Benin had operational command over the patrols, while tactical command was exercised by Nigeria.⁶⁶

Within months, a UN report indicated that Operation PROSPERITY had led to a reduction in piratical incidents off the coast of Benin.⁶⁷ This was corroborated by the military chief of Benin.⁶⁸ However, the fundamental question that should have been asked was, What has been the effect of PROSPERITY on the immediate regions of Nigeria and Benin?

Since the launch of Operation PROSPERITY there has been, on the one hand, a steady decrease in piracy off the coast of Benin, but on the other hand, an emergence of incidents off the Togolese coast.⁶⁹ Interestingly, attacks off the Togolese coast coincide with periods of few or none reported off Nigeria and Benin. Some have occurred deep inside port areas of Togo, like the earlier attacks in Benin. The IMB has noted that the Togo coast has become a piracy hot spot, with incidents increasing from a single attack in 2008 to fifteen in 2012.⁷⁰ This indicates that Operation PROSPERITY had simply pushed pirates and robbers farther to the west. The short coastlines of Benin and Togo have allowed pirates to treat the two coasts tactically as a single theater of operations. This can be inferred from two reported incidents in September 2011.⁷¹ On the 14th, at 4:15 AM, armed robbers attacked *Abu Dhabi Star*, a Singapore-flagged chemical tanker, a few nautical miles off Lomé, Togo, but aborted the attack upon being noticed by the ship's company. Four hours earlier, at 11:52 PM, two gangs of pirates had hijacked two tankers, *Mattheos I* and *Northern Bell*, that were conducting a ship-to-ship transfer, sixty-two nautical miles off Benin. The pirates succeeded in sailing *Mattheos I* to an unknown location, but the crew of *Northern Bell* regained control of their ship.

Analysis of these two incidents, taking into account time, location, and distance, suggests that the same gang of Niger Delta pirates that lost control of *Northern Bell* off the Benin coast sailed toward Togo, and then paid their predatory visit to *Abu Dhabi Star*. The IMB subsequently confirmed that Nigerian pirates have expanded into Togolese waters.⁷²

Cote d'Ivoire under Siege: Nowhere Is Safe

The hijacking of *Orfeas* in October 2012 marked the seventh phase of the evolution of piracy from a primary enclave in the Niger Delta into a well-entrenched regional threat. *Orfeas* was hijacked on 6 October 2012 off the coast of Cote d'Ivoire.⁷³ Gaining control of the vessel, the pirates sailed it over two thousand kilometers to the Niger Delta and stole the oil cargo, releasing the vessel two days later.⁷⁴ The hijacking encapsulates most of the tactics already discussed but also brings to the fore the new sophistication of Gulf of Guinea piracy. Soon after the hijacking, the pirates took the vessel into deeper water, both to make contact with their criminal networks and to put the ship out of reach of rescue. In December 2012, armed pirates with machine guns attacked another oil tanker in a Cote d'Ivoire port.⁷⁵ These incidents show that attacks in the western Gulf of Guinea have become more brazen.

EMERGENT PROFILE AND FUTURE PROJECTION

This seven-phase evolution shows that in the absence of robust responses the pirates are likely to consolidate and expand their activities. Effective counterpiracy

action must take into account the modus operandi of pirates, the piracy profile, and emerging trends. By the close of 2012, the evolving piracy profile of the Niger Delta pirates had crystallized, as summarized in table 2.

The above profile reflects a primary focus on the Niger Delta. However, Gulf of Guinea piratical activity is now marked by fluidity and increasing complexity. Effective responses should therefore assume the scope of the broader maritime security context, with particular attention on the evolving piracy track and criminal networks. The following trends should be closely watched.

Widening of the Niger Delta Factor

Unlike Somalia, where multilateral counterpiracy efforts have led to a steady decline in successful attacks since 2009, the Gulf of Guinea has seen an escalation.⁷⁶ This suggests that pirates in the region are mastering its geography and shipping profile. Distance is not a limiting factor for piratical activities; conversely, long-range attacks give pirates more time to plunder ships and transfer stolen cargo. Clearly, there is no area in the Gulf of Guinea too remote or too secure for piracy.

Indeed, in the primary piracy enclave we see two mutually reinforcing developments: consolidation and further widening. It is logical for the Niger Delta pirates to continue to view the coasts of Nigeria, Benin, and Togo as their normal

**TABLE 2
PROFILE OF GULF OF GUINEA PIRACY AS OF 2012**

Subject	Description/Outcome
<i>Platforms</i>	Speedboats, already used by insurgents. Ideal for piracy because of their speed and maneuverability. Generally faster than victim ships and naval ships.
<i>Grouping</i>	Up to forty pirates in multiple speedboats. Large numbers ideal for overpowering crews.
<i>Weapons</i>	AK-47s, machine guns, RPGs, grenades, and knives. Able to stop ships under way with firepower.
<i>Violence</i>	High level of violence and injury to crew. Instills fear and ensures quick outcome of attacks.
<i>Reach/range</i>	Southward: Nigeria to Equatorial Guinea (over 1,550 km). Westward: Nigeria to Cote d'Ivoire (over 2,000 km).
<i>Time</i>	Operate day and night but shifting more to night operations. Surprise achieved through night attack.
<i>Target ships</i>	Oil and product tankers; objective to steal refined oil cargo. Other vessels attacked for money and valuables.
<i>Mother ship</i>	Hijacked fishing vessels occasionally used as resupply basis or as decoy when approaching targeted ships.
<i>Assisting ships</i>	Tankers used to transfer stolen oil cargo.
<i>Ransom</i>	Increasingly not a prime motivation but still employed as a supplementary activity.
<i>Networks</i>	Stolen oil sold within and outside the region. Timing of attacks suggests prior information about locations of oil tankers.

zone while they venture into new areas. This new dynamic was unleashed in January 2014, with the hijacking of *Kerala* in Angola.⁷⁷ The tanker was subsequently sighted under the control of the hijackers off the coast of Nigeria, where part of the oil cargo, worth eight million U.S. dollars, was stolen.⁷⁸ This incident signified a southerly expansion of piracy attacks. The months of June and July saw three hijackings off Ghana, two of them of oil tankers, signifying a further enlargement of piracy threat, this time westward.⁷⁹ These attacks shattered the reputations of Angola and Ghana as having coast waters among the safest in the region. The incidents also demonstrated that oil tankers will continue to be targeted, because the financial rewards for the pirates and their accomplices, as well as for buyers of the stolen oil, are extremely high.⁸⁰ However, all other vessels are also susceptible prey.

Other Piratical Groups within the Primary Piracy Enclave

But even the primary piracy enclave can get more complicated. There is a history of attacks by two organized groups in neighboring Cameroon that are completely removed from the Niger Delta insurgency. One, the Bakassi Freedom Fighters (BFF), is opposed to Nigeria's return of the Bakassi Peninsula to Cameroon.⁸¹ The BFF attacked an oil tanker in 2008, kidnapping the crew and detaining them for ten days before negotiating a ransom payment.⁸² The second group, the Africa Marine Commando (AMC), kidnapped a Chinese fishing crew in 2010 and extorted a ransom for their release.⁸³ There have been no other discernible piratical attacks by the BFF or the AMC, partly because of robust responses from the Cameroon government, including lethal force.⁸⁴ However, the groups are far from being dismantled; reports indicate that the AMC was involved in the kidnapping of local officials in 2011.⁸⁵

Concerns in the Secondary Piracy Enclave

Another concern is the future safety of the coasts of Guinea and Sierra Leone. Incidents in this enclave are fewer than off the Niger Delta but worrisome because of the high level of violence employed. There is also a very close correlation between reported piracy off the coast of Guinea and incidents in neighboring Sierra Leone—a portent of organized criminal activity in the latter area. In March 2007, pirates armed with machine guns boarded *Atropos*, which was under way forty nautical miles off Sierra Leone.⁸⁶ In August of the same year, thirty pirates armed with guns boarded a United Kingdom-registered product tanker off Guinea.⁸⁷ That December pirates armed with AK-47s and wearing military-like uniforms fired on and boarded a tanker off Sierra Leone.⁸⁸ In August 2010, ten pirates armed with AK-47s attacked a ship off the coast of Guinea;⁸⁹ more recently, in 2012, a Maltese cargo ship, *Costanza*, was attacked twenty nautical miles off Guinea by pirates, again armed with AK-47s, damaging the ship.⁹⁰ These are indications of entrenched piratical activity in this secondary enclave.

Threats beyond Piracy

While the Gulf of Guinea grapples with a spate of piratical activity, new transnational actors are gaining notoriety in the region. The Nigerian extremist Islamist group Boko Haram, whose activities were previously confined to the northern part of the country, has broadened its operations across Nigeria and neighboring states.⁹¹ In August 2011, the group claimed responsibility for a suicide attack on the United Nations office in Nigeria, killing eighteen staff and injuring over a hundred others.⁹² This attack dramatically changed earlier assessments that had viewed the group's threat as limited.⁹³ In June 2013, following repeated attacks on major cities and towns, the government of Nigeria officially declared Boko Haram a terrorist group;⁹⁴ the Nigerian minister of defense emphatically described it as a franchise of Al Qaeda.⁹⁵

To date, there have been no reports of maritime attacks by Boko Haram. Although a strike on an onshore pipeline in February 2012 by militants "want[ing] to register their presence" raised fears that Boko Haram may have been targeting strategic oil assets, no connection with it has been established.⁹⁶ Nevertheless, the possibility of Boko Haram or another terrorist group, such as Al Qaeda in the Islamic Maghreb (AQIM), targeting offshore oil and gas installations in the Gulf of Guinea cannot be discounted.⁹⁷ Indeed, the high value of these assets, coupled with their vulnerability, makes them attractive targets.⁹⁸

COUNTERPIRACY IMPERATIVES

This article has established an increasing threat of piracy in the Gulf of Guinea. As attacks spread southward from the secondary enclave in Guinea, a piracy arc reaching to the primary enclave of the Niger Delta will be formed, leading to a very grave situation for the safety of shipping, offshore energy security, and the stability of the region. Effective remedial measures must be adopted by regional states and the international community. In designing these measures lessons from recent multilateral efforts in Somalia would certainly be useful, but cognizance should also be given to the distinctive dynamics of this new theater. On the whole, five thematic areas must be addressed.

Improved Governance

The governance nexus with piracy in the Gulf of Guinea is important. The consequence of a governance deficit goes beyond the spiral of piratical attacks being witnessed. It also finds expression in a myriad of maritime security challenges, including illegal, unregulated, and unreported fishing and illegal migration by sea.⁹⁹

The 2006 UN *Niger Delta Human Development Report* provides an incisive description of the conditions of the people of the Niger Delta.¹⁰⁰ The report notes that the region has "dismal health and health service delivery," that the people live in "predominantly . . . poor quality [housing]," and that nearly all school facilities

are in “a state of extreme disrepair.” It reports increasing “disillusionment and frustration,” as well as “deepening . . . deprivation and environmental devastation.”¹⁰¹ Research suggests that the quantity of oil spilled in the Niger Delta over the last fifty years is more than fifty times the volume spilled in the *Exxon Valdez* accident of 1989—one of the greatest environmental disasters the world has ever witnessed.¹⁰² Such poor environmental management has led to serious pollution and environmental degradation, limiting the opportunity of people to earn a living from either farming or fishing.¹⁰³

Realistically, therefore, bad governance must be said to lie at the heart of the maritime security challenges in the Gulf of Guinea. Considering the tremendous oil wealth generated by the Niger Delta region, the dismal social picture painted by the UN report is otherwise difficult to comprehend. Resentment would be at its height in such an environment, leading to restiveness, conflict, and crime.¹⁰⁴ In any case, poor governance creates a malignant environment that can be exploited by pirates and transnational criminal networks.¹⁰⁵

Enhanced Capability

The impunity with which ship hijackings are conducted in the Gulf of Guinea, at times deep inside ports, is symptomatic of weakness in policing, surveillance, and response capabilities.¹⁰⁶ Although security-sector funding is generally inadequate in the Gulf of Guinea, the situation with respect to navies and coast guards is especially problematic. Angola’s allocation of resources for the protection of its maritime estate is typical for Gulf of Guinea states. Angola has an estimated coastline of 1,600 kilometers—the longest in the region. Its gross domestic product is the second highest in the region, much of it derived from offshore resources. Yet the personnel strength of the Angolan navy is only a thousand (compared to a hundred thousand for Angola’s army and six thousand for its air force), and its equipment state is palpably inadequate, in contrast to that of the army.¹⁰⁷ The Nigerian navy is similarly underfunded and limited in capability.¹⁰⁸ Its personnel strength of eight thousand is the largest in the Gulf of Guinea but in sharp contrast to the sixty-two-thousand-strong Nigerian army.¹⁰⁹ Liberia represents another anomaly, not just for the Gulf of Guinea but with respect to how the global maritime community as a whole matches responsibility with maritime interest. Although Liberia is the second-largest flag state in the world, its diminutive coast guard has only fifty personnel and eight craft, all under ten feet in length.¹¹⁰

A quick glance at the other navies and coast guards reveals a similarly worrisome situation.¹¹¹ It is evident that the maritime jurisdiction and interest available to Gulf of Guinea states are not commensurate with the exercise of responsibility to ensure the safety and security of their coasts.¹¹² This capability gap must be addressed.

Effective Legal Framework

An inadequate legal framework too undermines maritime security in the Gulf of Guinea. Article 100 of UNCLOS encapsulates two interrelated obligations regarding piracy. States are required, first, to suppress piracy at the national level, and second, to cooperate with other states in that effort at the regional and international levels.¹¹³ To give practical effect to the former, Gulf of Guinea states must enact and enforce laws covering all aspects of the crime of piracy.¹¹⁴ With respect to the second obligation, cooperative instruments and structures should be established that facilitate the sharing of information, at the minimum, and also possibly lead to joint patrols.

However, Liberia and Togo are the only states in the region that have up-to-date piracy legislation.¹¹⁵ It was only in January 2013 that Nigeria initiated the process of enacting a law to combat piracy and other maritime crimes.¹¹⁶ A UN assessment mission observed that the definition in the national laws of Benin of the crime of piracy was outdated and inconsistent with the provisions of UNCLOS.¹¹⁷ In summary, there is a legislative deficit with respect to the crime of piracy in the Gulf of Guinea. Thus, even were states able to patrol their coasts, they would be unable to prosecute or punish offenders. The likely result would be a “catch and release syndrome,” as was manifested in the early periods of Somali piracy when counterpiracy forces frequently released apprehended pirates because of difficulties in prosecution, thus further entrenching insecurity.¹¹⁸ The Gulf of Guinea states must therefore create an effective counterpiracy regime, first passing laws against piracy, with accompanying penalties, and second, providing the necessary prosecution and judicial structures.

A related important global instrument is the Convention for the Suppression of Unlawful Acts against the Safety of Maritime Navigation, 1988 (known as the 1988 SUA Convention), and its protocols.¹¹⁹ The 1988 SUA Convention established a basis for responding to a spectrum of violent crimes at sea, from insurgency to terrorism.¹²⁰ These crimes tend to fall outside the scope of piracy as defined by UNCLOS.¹²¹ The 1988 SUA Convention has addressed such gaps, giving Gulf of Guinea states the opportunity to respond effectively to these threats.

Despite the relevance of the SUA regime, ratification and implementation of SUA instruments by Gulf of Guinea states have been unsatisfactory. Only Cote d'Ivoire is a party to all the SUA instruments, but only since 2012.¹²² Angola, Cameroon, Republic of the Congo, Gabon, and Nigeria—all of them major oil-producing states with substantial offshore infrastructures—have not ratified the 1988 SUA Fixed Platform Protocol. States that have ratified SUA instruments have generally failed to incorporate them into their domestic legal systems.¹²³ For example, Benin, Cote d'Ivoire, Ghana, and Nigeria have all ratified the 1988

SUA Convention, but not one has incorporated the convention into its national law.¹²⁴ Since 2004 the UN has emphasized the importance of the SUA framework for maritime security.¹²⁵ It is therefore imperative that Gulf of Guinea states ratify and implement the SUA instruments within their domestic legal and policy frameworks. They should then develop regional responses, on the SUA framework.

Robust Regional Cooperation

Maritime security cooperation in the Gulf of Guinea is increasing; however, it is crucial that initiatives be tailored to meet the needs of the region. Member states of the ECCAS in 2009 adopted a Protocol on Maritime Security, based on a structure that divides the ECCAS grouping into zones to enhance joint patrol, monitoring, and enforcement.¹²⁶ This structure is being replicated for the entire Gulf of Guinea as part of the Yaoundé Code of Conduct. For instance, ECOWAS member states decided to establish a pilot Zone E, comprising Nigeria, Benin, Togo, and the landlocked state of Niger.¹²⁷ However, a number of issues have to be addressed: information sharing, realistic funding, interoperability, and current and future maritime boundary disputes.¹²⁸

Viable International Cooperation

International maritime security cooperation too has gained traction in the Gulf of Guinea; the United States has achieved a good deal of visibility in this regard. The United States launched its Africa Partnership Station (APS) in 2007 with the deployment of the catamaran HSV-2 *Swift* and the dock landing ship USS *Fort McHenry* (LSD 43) to the Gulf of Guinea, and there has since been a consistent APS presence in the region.¹²⁹ While serving as a platform for capacity building and joint exercises, the APS also contributes to the strategic objectives of power projection and cooperative engagement for the United States through the U.S. Africa Command (AFRICOM).¹³⁰ Other U.S. government and policy institutions, including the Africa Center for Strategic Studies, at Fort McNair in Washington, D.C., are also engaged in meeting nonmilitary maritime-security needs of the Gulf of Guinea.

The European Union launched the Critical Maritime Routes in the Gulf of Guinea (CRIMGO) project in January 2013.¹³¹ The initiative is designed to improve safety and security off the coasts of seven states.¹³² Several other states as well are keenly engaged with the Gulf of Guinea on maritime security, as epitomized by the increasing port visits of foreign navies in the last couple of years.¹³³ Even the Chinese People's Liberation Army Navy, which traditionally has had no presence in the region, visited Cameroon in May 2014 and reportedly undertook antipiracy joint drills with the host country.¹³⁴ At the multilateral level, both the International Maritime Organization and the United Nations Office

on Drugs and Crime have maritime security capacity-building programs in the Gulf of Guinea. There is also an initiative by the international police community (INTERPOL) focused on the investigation of maritime-security incidents.¹³⁵ This will be a useful means of unearthing patterns of maritime crime and criminal networks.

Although international cooperation holds out the prospect of enhancing maritime security in the Gulf of Guinea, a number of challenges have to be addressed, of which two deserve highlighting here. First is the need for coordination of international partnerships. Multiple cooperative initiatives are currently being unpacked in the region that national administrators and regional institutions are required to respond to and then implement. They overcrowd national and regional policy, adversely affecting maritime-security decision making and coordination. External actors, donor agencies, and relevant international organizations should instead engage with Gulf of Guinea states in a harmonized, coordinated way. Second, while maritime security cooperation is arguably a means for nonregional states to pursue wider strategic interests, some have made no allocation of logistical support or funds corresponding to the maritime-security needs of the region. For example, France pledged only U.S.\$1.6 million to support maritime security in 2013, while funding for the CRIMGO project is just €4.5 million.¹³⁶ This amounts to a fraction of the annual cost of the Nigerian-Benin joint patrols (Operation PROSPERITY), estimated by the UN at U.S.\$112 million.¹³⁷

Given the socioeconomic realities in the Gulf of Guinea, where many states are at the bottom of the global development index, external partnerships should contribute substantially to the enhancement of capacity and capability.¹³⁸ An arrangement similar to the trust fund established under the auspices of the IMO to facilitate counterpiracy initiatives in the Indian Ocean and the Gulf of Aden is recommended for the Gulf of Guinea.¹³⁹ Of course, the prevailing governance nemesis in the region makes such a fund susceptible to corruption and abuse. The framework must therefore have inbuilt mechanisms and checks to ensure the transparent and efficient application of the fund.

NOTES

- The views expressed in this article are those of the author and should not be attributed to the Ghana Armed Forces or to any other institution with which the author is affiliated.
1. United Nations [hereafter UN] General Assembly, Resolution 2018, "Piracy and Security in Africa," 31 October 2011; idem, Resolution 2039, "Peace Consolidation in West Africa," 29 February 2012.
 2. UN Security Council [hereafter UNSC], *Report of the United Nations Assessment Mission on Piracy in the Gulf of Guinea*, UNSC S/2012/45 (New York: 19 January 2012) [hereafter UNSC, *Piracy in the Gulf of Guinea*].

3. Summit of Heads of State and Governments of ECOWAS and ECCAS, Yaoundé, Cameroon, 24–25 June 2013; UN News Center, “Ban Welcomes Anti-piracy Strategy Adopted by Leaders from West, Central Africa,” 29 December 2013, available at www.un.org/; idem, “At UN-Backed Meeting, African States Seek to Combat Piracy in Gulf of Guinea,” 29 December 2013, available at www.un.org/.
4. International Maritime Organization [hereafter IMO], *Reports on Acts of Piracy and Armed Robbery against Ships: Acts Reported during July 2013*, MSC.4/Circ.200 (London: 15 August 2013) [hereafter *Piracy and Armed Robbery*: (subtitle) in shortened citations to either the IMO or the International Maritime Bureau publications of this title].
5. IMO, *Reports on Acts of Piracy and Armed Robbery against Ships: Annual Report 2013*, MSC.4/Circ.208 (London: 1 March 2013 [sic]). The correct date of adoption of *Annual Report 2013* is 1 March 2014.
6. States within the region are Cape Verde, Senegal, Gambia, Guinea-Bissau, Guinea, Sierra Leone, Liberia, Cote d’Ivoire, Ghana, Togo, Benin, Nigeria, Cameroon, Equatorial Guinea, Sao Tome and Principe, Gabon, Republic of the Congo, Democratic Republic of the Congo, and Angola.
7. Harry D. Gould, “Cicero’s Ghost: Rethinking the Social Construction of Piracy,” in *Maritime Piracy and the Construction of Global Governance*, ed. Michael J. Struett, Jon D. Carlson, and Mark T. Nance (New York: Routledge, 2013), pp. 23–46; Gerhard W. Mueller and Freda Adler, *Outlaws of the Ocean: The Complete Book of Contemporary Crime on the High Seas* (New York: Hearst Marine Books, 1985); John C. Payne, *Piracy Today: Fighting Villainy on the High Seas* (Dobbs Ferry, N.Y.: Sheridan House, 2010).
8. Robin Churchill and Vaughan Lowe, *Law of the Sea* (Manchester, U.K.: Univ. of Manchester Press, 1999), p. 210; Eugene Kontorovich, “Universal Jurisdiction and the Piracy Analogy,” *Harvard International Law Journal* 45, no. 1 (2004), pp. 183–237; M. Cherif Bassiouni, “The History of Universal Jurisdiction and Its Place in International Law,” in *Universal Jurisdiction: National Courts and the Prosecution of Serious Crimes under International Law*, ed. Stephen Macedo (Philadelphia: Univ. of Pennsylvania Press, 2004).
9. United Nations Convention on the Law of the Sea [hereafter UNCLOS], 1833 UNTS 397. The full text of the convention is reprinted in 21 ILM 1261 (1982).
10. *Ibid.*, art. 101.
11. Robin Geiss and Anna Petrig, *Piracy and Armed Robbery at Sea: The Legal Framework for Counter-piracy* (Oxford, U.K.: Oxford Univ. Press, 2011), pp. 37–40; Terence Fokas, “The Barbary Coast Revisited: The Resurgence of International Maritime Piracy,” *University of San Francisco Maritime Law Journal* 9 (1997), pp. 427–60.
12. Martin N. Murphy, *Contemporary Piracy and Maritime Terrorism: The Threat to International Security*, Adelphi Paper 388 (London: International Institute for Strategic Studies, 2007), pp. 12–35; Maximo Q. Mejia, Jr., “Modern Piracy at Sea: Selected Legal Aspects,” *International Proceedings of Economics Development and Research* 48, no. 21 (2012), pp. 96–100. See also Maximo Q. Mejia, Jr., “Maritime Gerrymandering: Dilemmas in Defining Piracy, Terrorism, and Acts of Maritime Violence,” *Journal of International Commercial Law* 2, no. 2 (2003), pp. 152–75.
13. Some of these instances of “banditry” or “piracy” were, however, offshoots of contests among coastal kingdoms to control or influence trade and commerce. Ukoha Ukiwo, “From ‘Pirates’ to ‘Militants’: A Historical Perspective on Anti-state and Anti-Oil Company Mobilization among the Ijaw of Warri, Western Niger Delta,” *African Affairs* 106, no. 425 (2007), pp. 587–610; John Darnton, “Pirates Plying Nigerian Seas,” *New York Times*, 9 January 1977; P. C. Lloyd, “The Itsekiri in the Nineteenth Century: An Outline Social History,” *Journal of African History* 4, no. 2 (1963), pp. 207–231.
14. The International Maritime Organization, previously known as the Intergovernmental Maritime Consultative Organization, was established in 1948 to regulate shipping and navigation safety. The IMO plays a major role in ensuring the security of international shipping through international agreements and recommended best practices. All the coastal states in the Gulf of Guinea are members of

- the IMO. See *IMO: International Maritime Organization*, www.imo.org.
15. International Maritime Bureau [hereafter IMB], *Reports on Acts of Piracy and Armed Robbery against Ships: Annual Report 2009* (London: January 2010), p. 41.
 16. Peter J. Pham, "Africa's Other Dangerous Waters: Piracy in the Gulf of Guinea," *World Defence Review* 3 (December 2009); Scott Baldauf, "Pirates Take New Territory: West African Gulf of Guinea," *Christian Science Monitor*, 15 January 2010.
 17. IMO, *Reports on Acts of Piracy and Armed Robbery against Ships: Acts Reported during May 2006*, MSC.4/Circ.87 (London: 20 June 2006).
 18. *Ibid.*
 19. IMB, *Piracy and Armed Robbery: Annual Report 2009*; *idem*, *Reports on Acts of Piracy and Armed Robbery against Ships: Annual Report 2010* (London: January 2011).
 20. IMO, *Reports on Acts of Piracy and Armed Robbery against Ships: Acts Reported during August 2012*, MSC.4/Circ.188 (London: 29 October 2012).
 21. IMB, *Reports on Acts of Piracy and Armed Robbery against Ships: Annual Report 2008*, p. 26; United Nations Office on Drugs and Crime, *Transnational Organized Crime in West Africa: A Threat Assessment* (Vienna: February 2013).
 22. Nigeria is a federal state; and the Niger Delta region is made up of Delta State, Bayelsa State, Edo State, Ondo State, and Rivers State. The swampy coastal areas and deep seas bordering the Niger Delta constitute one of the world's richest oil and gas regions. John H. Enemugwem, "The Niger Delta of Nigeria: A World Class Oil Region in Africa, 2000–2006," *Africana* (June 2012), pp. 166–81.
 23. The Joint Revolutionary Council (JRC) emerged as an umbrella organization for MEND, the Niger Delta People's Volunteer Force, and the Martyrs Brigade. The JRC was used as a platform to claim responsibility for attacks and release public statements. See "Country Briefing: Nigeria—April 2009 to March 2010," *Jane's Terrorism Monitor*, 7 May 2010.
 24. See "Nigeria's MEND: A Different Militant Movement," *Stratfor Global Intelligence*, 19 March 2009, www.stratfor.com/, and Stephanie Hanson, *MEND: The Niger Delta's Umbrella Militant Group* (New York: U.S. Council on Foreign Relations, 22 March 2007), available at www.cfr.org/.
 25. Ilufoye S. Ogundiya, "Domestic Terrorism and Security Threats in the Niger Delta Region of Nigeria," *Journal of Social Science* 20, no. 1 (2009), pp. 31–42.
 26. *Okrika* is a MEND term, meaning area of control. Each *okrika* is regarded as semiautonomous and is controlled by a leader or commander. See "Nigeria's MEND."
 27. For a detailed analysis of these attacks, see Mikhail Kashubsky, "Offshore Petroleum Security: Analysis of Offshore Security Threat, Target Attractiveness, and the International Legal Framework for the Protection and Security of Offshore Petroleum Installations" (PhD thesis, University of Wollongong, 2011), pp. 89–142.
 28. See "Country Briefing: Nigeria—April 2009 to March 2010"; and Arild Nodland, "Guns, Oil, and 'Cake': Maritime Security in the Gulf of Guinea," in *Piracy and Maritime Crime: Historical and Modern Case Studies*, ed. Bruce A. Elleman, Andrew Forbes, and David Rosenberg, Newport Paper 35 (Newport, R.I.: Naval War College Press, 2010), pp. 191–206.
 29. "Nigeria: 3 Naval Men Feared Killed by MEND," *IntelliBrief*, 7 April 2007; "Nine Nigerian Navy Members Killed in Fresh Attack," Agence France-Presse, 10 June 2008; "3 Nigerian Navy Soldiers Killed, 2 Gunboats Captured," *Panapress*, 3 April 2009.
 30. The First Amnesty Proclamation was issued on 25 June 2009. Oscar E. Ubhenin, "The Federal Government's Amnesty Programme in the Niger-Delta: An Appraisal," *Yönetim Bilimleri Dergisi* 21, no. 1 (2013), pp. 179–203.
 31. For a detailed analysis of the *Bonga* incident and its effect on global energy and insurance industries, see Mikhail Kashubsky, "Offshore Energy Force Majeure: Nigeria's Local Problem with Global Consequences," *Maritime Studies* (May–June 2008), pp. 20–26.
 32. Kashubsky, "Offshore Petroleum Security," p. 35. *Aban VII* was outside the territorial sea of India when it was boarded; IMB, *Reports on Acts of Piracy and Armed Robbery against*

- Ships: Annual Report 2006* (London: January 2007), p. 53.
33. *Bulford Dolphin* (Singapore) was attacked on 1 April 2007, sixty-four kilometers off the Nigerian coast. The kidnapped worker was released four days later; IMB, *Reports on Acts of Piracy and Armed Robbery against Ships: Annual Report 2007* (London: January 2008), p. 66. It is noted that the IMB report identifies the rig as *Bueford Dolphin*, but the author's research (which included a review of the comparative IMO annual report for 2007, MSC.4/Circ.115 [10 April 2008]) confirms that the correct name is *Bulford Dolphin*.
 34. *Mystras*, an FPSO, was attacked on 3 May 2007, while *Trident VIII*, a mobile offshore drilling rig, was attacked 5 May. In both cases people were kidnapped. IMB, *Piracy and Armed Robbery: Annual Report 2007*, p. 67. See also the listing of these incidents in IMO, *Reports on Acts of Piracy and Armed Robbery against Ships: Annual Report 2007*, MSC.4/Circ.115 (London: 10 April 2008), pp. 11–12.
 35. S. Bajpai and Jai Gupta, "Securing Oil and Gas Infrastructure," *Journal of Petroleum Science and Engineering* 55 (2007), pp. 174–86.
 36. "Bonga Deepwater Project, Niger Delta," *Offshore Technology*, www.offshore-technology.com/. For a detailed analysis of the *Bonga* incident and its effect on global energy and insurance industries, see Kashubsky, "Offshore Energy Force Majeure."
 37. Alexander Kwiatkowski and Julie Ziegler, "Shell Shuts Nigeria's Bonga Oil Field after Attack," *ODAC: The Oil Depletion Analysis Centre*, 19 June 2008, www.odac-info.org/; Jeff Vail, "Nigeria: The Significance of the Bonga Offshore Oil Platform Attack," *Oil Drum*, 24 June 2008, www.theoil Drum.com/.
 38. On threats to offshore energy, see Mikhail Kashubsky, "Protecting Offshore Oil and Gas Installations: Security Threats and Countervailing Measures," *Journal of Energy Security* (August 2013), available at www.ensec.org/.
 39. See "Observing the Offshore 'Bonga' Attack," *Information Dissemination* (blog), 27 June 2008, www.informationdissemination.net/.
 40. Ordinary members of the insurgency were to receive approximately four hundred dollars a month, an amount exceeding the monthly income of most public-sector workers in Nigeria and the region generally. See *The Gulf of Guinea: The New Danger Zone*, Africa Report 195 (Brussels: International Crisis Group, 12 December 2012).
 41. Insurgent leaders reportedly lived in the executive suite of Abuja's Hilton Hotel for months, regularly meeting and dining with politicians and other influential people. In 2011, former insurgent leaders Dokubo-Asari and Ekpumopolo allegedly received nine million and 22.9 million U.S. dollars, respectively, from the Nigerian National Petroleum Company as annual payments for offering protection to critical oil infrastructure. See Drew Hinshaw, "Nigeria's Former Oil Bandits Now Collect Government Cash," *Wall Street Journal*, 22 August 2012.
 42. Between 1 April 2009 and 31 March 2010, Jane's Terrorism and Insurgency Centre recorded seventy-five successful attacks in Nigeria as a whole, an average of 6.3 per month. In late June, the Nigerian federal government launched the amnesty program with MEND. By August, attacks had decreased; many militants, including some senior commanders, were embracing the amnesty program. "Country Briefing: Nigeria—April 2009 to March 2010."
 43. See also IMO, *Reports on Acts of Piracy and Armed Robbery against Ships: Annual Report 2009*, MSC.4/Circ.152 (London: 29 March 2010), pp. 31–33. Only three attacks occurred between April and June 2009, a period coinciding with the commencement of the amnesty arrangement. Between October and November 2009 there were seven recorded attacks; this figure is low compared with the same period the previous year, but it shows that the number of attacks started to rise by the close of the year owing to dissatisfaction and frustration within MEND. Indeed, it has been suggested that around this time younger insurgents began accusing senior commanders of corruption and betrayal.
 44. Citing IMB, *Piracy and Armed Robbery: Annual Report 2010*, pp. 97–98.
 45. Nodland, "Guns, Oil, and 'Cake.'"
 46. See "MEND Threatens 'Onslaught' on Nigerian Oil Trade," *Jane's Terrorism and Security Monitor*, February 2010, and "MEND Threatens More Violence," *Jane's Terrorism and Security Monitor*, October 2010.

47. John T. Picarelli, "The Turbulent Nexus of Transnational Organised Crime and Terrorism: A Theory of Malevolent International Relations," *Global Crime* 7, no. 1 (2006), pp. 1–24; Chris Dishman, "Terrorism, Crime and Transformation," *Studies in Conflict and Terrorism* 24, no. 1 (2001), pp. 43–58.
48. Anna Dunin, "The Niger Delta: Where Oil Is a Curse," *Geopolitical Monitor*, 8 August 2011, www.geopoliticalmonitor.com/. See also Dennis Naku, "MEND Calls for Probe of Amnesty Committee," allafrica.com, 10 June 2011.
49. The director of IMB remarked in 2009 that "unlike Somalia, Nigeria has an effective government and the strongest Navy in the region. What is worrying is that there appears to be no political will to combat the problem of piracy off their waters and coast." IMB, *Piracy and Armed Robbery: Annual Report 2009*, p. 41.
50. IMO, *Reports on Acts of Piracy and Armed Robbery against Ships: Acts Reported during August 2006*, MSC.4/Circ.91 (London: 11 September 2006); IMO, *Reports on Acts of Piracy and Armed Robbery against Ships: Acts Reported during May 2007*, MSC.4/Circ.103 (London: 9 July 2007).
51. For Somalia, Roger Middleton, Chatham House Briefing Paper (London: Royal Institute of International Affairs, October 2008).
52. IMO, *Reports on Acts of Piracy and Armed Robbery against Ships: Annual Report 2008*, MSC.4/Circ.133 (London: 19 March 2009), pp. 62–69.
53. *Africa Research Bulletin* 18155, 16 February–15 March 2009.
54. ECCAS, Protocole Relatif à la Stratégie de Sécuritisation des Intérêts Vitaux en Mer des États de la CEEAC du Golfe de Guinée, Yaoundé, Cameroon, 24 October 2009.
55. IMO, *Piracy and Armed Robbery: Annual Report 2009*.
56. Alexander O. Exquemelin, *The Buccaneers of America* (Annapolis, Md.: Naval Institute Press, 1993).
57. IMO, *Reports on Acts of Piracy and Armed Robbery against Ships: Acts Reported during February 2011*, MSC.4/Circ.168 (London: 14 March 2011); IMO, *Reports on Acts of Piracy and Armed Robbery against Ships: Acts Reported during March 2011*, MSC.4/Circ.170 (London: 14 April 2011).
58. Patrick Dele Cole, a politician from the oil-rich Niger Delta region, says that 90 percent of the stolen oil is being shipped out of the country illegally; "Stolen Nigeria Oil 'Goes to Balkans and Singapore,'" *Ghana Oil Watch*, 23 October 2012, ghanaoilwatch.org/. See also Christina Katsouris and Aaron Sayne, "Nigeria's Criminal Crude: International Options to Combat Export of Stolen Oil," *Chatham House*, September 2013, pp. 2–12.
59. IMO, *Reports on Acts of Piracy and Armed Robbery against Ships: Acts Reported during June 2011*, MSC.4/Circ.173 (London: 11 July 2011), and *Acts Reported during July 2011*, MSC.4/Circ.174 (London: 8 August 2011)
60. IMO, *Piracy and Armed Robbery: Acts Reported during June 2011*, and *Acts Reported during July 2011*.
61. IMB, *Reports on Acts of Piracy and Armed Robbery against Ships: Annual Report 2011* (London: January 2012).
62. Ibid.
63. UNSC, *Piracy in the Gulf of Guinea*.
64. Ibid.
65. See "Benin Seeks Nigeria's Help to Fight Sea Pirates," *Next Newspapers*, 12 August 2011.
66. There is hardly any detailed official information from Nigeria and Benin on Operation PROSPERITY. This information is gathered from interaction with naval officers of the two states directly involved and from presentations and briefings on PROSPERITY delivered by officers from Nigeria and Benin at the Australian National Centre for Ocean Resources and Security in November 2012.
67. UNSC, *Piracy in the Gulf of Guinea*.
68. "Nigeria-Benin Anti-piracy Patrols 'Successful,'" *DefenceWeb*, 18 October 2011, www.defenceweb.co.za/.
69. For details of incidents in the months under review see IMO, *Reports on Acts of Piracy and Armed Robbery against Ships: Acts Reported during November 2011*, MSC.4/Circ.178 (London: 20 December 2011); *Acts Reported during December 2011*, MSC.4/Circ.179 (London: 10 January 2012); *Acts Reported during January 2012*, MSC.4/Circ.181 (London: 10 February 2012); and *Acts Reported during*

- February 2012, MSC.4/Circ.182 (London: 30 April 2012).
70. IMB, *Reports on Acts of Piracy and Armed Robbery against Ships: Annual Report 2012* (London: January 2013), pp. 5, 6, 21.
 71. IMO, *Reports on Acts of Piracy and Armed Robbery against Ships: Acts Reported during September 2011*, MSC.4/Circ.176 (London: 1 November 2011).
 72. IMB, *Piracy and Armed Robbery: Annual Report 2012*, p. 25.
 73. IMO, *Reports on Acts of Piracy and Armed Robbery against Ships: Acts Reported during October 2012*, MSC.4/Circ.190 (London: 21 January 2013).
 74. Ibid.
 75. The chemical tanker *Madonna 1* (Panama) was attacked on 23 December 2012. The pirates injured the crew, damaged the ship's communication equipment, and stole ship's property and personal belongings. See IMO, *Reports on Acts of Piracy and Armed Robbery against Ships: Acts Reported during December 2012*, MSC.4/Circ.192 (London: 24 January 2012).
 76. It is important to distinguish between attempted attacks and successful ones. Although the number of attacks off the Horn of Africa and in the wider Indian Ocean continues to increase, the rate of success has declined tremendously, especially on the East African coast, thanks to the presence of foreign forces. On the declining state of Somali piracy, see Bruce Legge, "Countering Somali Piracy: Success, Failure or Status Quo?," *Combined Maritime Forces*, 27 July 2012, combinedmaritimeforces.com/.
 77. IMO, *Reports on Acts of Piracy and Armed Robbery against Ships: Acts Reported during January 2014*, MSC.4/Circ.206 (London: 7 March 2014).
 78. "Tanker Hijacked off Angola in Jan Returned, minus \$8m Diesel," Reuters, 24 February 2014, www.reuters.com/.
 79. The hijacked vessels in June were MT *Fair Artemis*, a Greek-owned oil tanker flying the Liberian flag, and MV *Mariner 771*, a Ghanaian-registered fishing vessel; *Hai Soon 6*, a Kiribati-flagged oil tanker, was hijacked in July.
 80. Katsouris and Sayne, "Nigeria's Criminal Crude."
 81. The return of the Bakassi Peninsula by Nigeria to Cameroon follows the decision of the International Court of Justice, *Land and Maritime Boundary between Cameroon and Nigeria (Cameroon v. Nigeria: Equatorial Guinea intervening)*, Judgment of 10 October 2002. See generally Hilary V. Lukong, *The Cameroon-Nigeria Border Dispute: Management and Resolution, 1981–2011* (Oxford, U.K.: African Book Collective, 2011).
 82. *Sagitta*, a supply ship (France), was attacked on 31 October 2008 off the Bakassi Peninsula, within the territorial sea of Cameroon. The kidnapped crew members were released on payment of a ransom on 11 November 2008. See IMO, *Piracy and Armed Robbery: Annual Report 2009*.
 83. "New Pirates Group Africa Marine Commando Group," *Close Protection World*, 17 March 2010, www.closeprotectionworld.com/.
 84. Chris Rawley, "Africa Marine Commando on the Rise," *Information Dissemination* (blog), 7 April 2011, www.informationdissemination.net/.
 85. See *Gulf of Guinea: The New Danger Zone*, pp. 13–14.
 86. IMO, *Piracy and Armed Robbery: Annual Report 2007*.
 87. *Wappen Von Leipzig*, oil tanker; *ibid.*, p. 69.
 88. *Jamal Massry*, tanker, Gambian registry; *ibid.*, p. 74.
 89. IMO, *Piracy and Armed Robbery: Annual Report 2010*.
 90. IMO, *Piracy and Armed Robbery: Acts Reported during August 2012*. Note also the hijacking of *Marciana*, a Maltese general-cargo ship, in October 2012; IMO, *Piracy and Armed Robbery: Acts Reported during October 2012*.
 91. *Boko Haram* translates to "Western education is bad." The group is an extremist Islamic sect in northern Nigeria that is waging a war against the government, demanding the institutionalization of Islamic rule. According to the United States Institute of Peace, the group is not in the same category as other terrorist groups, as it is not targeting Western interests. See Andrew Walker, *What Is Boko Haram?*

- (Washington, D.C.: United States Institute of Peace, May 2012), available at www.usip.org/.
92. "UN House Bombing: Boko Haram Claims Responsibility," *Vanguard* (Apapa, Lagos, Nigeria), 27 August 2011, available at nigerianbulletin.com/. See also Bashir Adigun, "UN Headquarters Car Bombing in Nigeria Kills 18," Associated Press, 27 August 2011, available at www.google.com/.
 93. See "Country Briefing: Nigeria—April 2009 to March 2010"; and Gwynne Dyer, "Nigeria and Boko Haram: Islamist Extremists Threaten Democracy and Muslim-Christian Unity in Africa's Largest Country," *Hamilton (Ont.) Spectator*, 29 August 2011, www.thespec.com/.
 94. "Jonathan Officially Declares Boko Haram a Terrorist Organization," *Premium Times* (Abuja, Nigeria), 4 June 2013, www.premiumtimes.com.
 95. Hon. Erelu Olusola Obada, "Nigeria's Defence Priorities: Domestic Stability for Regional Security," *Chatham House*, 18 July 2013, p. 4. See also Ola Awoniyi, "Nigeria Defence Chief Says Boko Haram Has Ties to Al-Qaeda," *Agence France-Presse*, 23 February 2012.
 96. "Militants Claim Attack on Eni Oil Pipeline," *BusinessDay*, 5 February 2012, www.businessdayonline.com/.
 97. The AQIM operates in western Africa, largely within Chad, Mali, Niger, and Senegal; Anneli Botha, *Terrorism in the Maghreb: The Transnationalisation of Domestic Terrorism*, ISS Monograph 144 (Pretoria, S. Afr.: Institute for Security Studies, June 2008). See also UNSC, "Peace and Security in Africa," *May 2013 Monthly Forecast*, www.securitycouncilreport.org/.
 98. Hans Tino Hansen, "Distinctions in the Finer Shades of Gray: The 'Four Circles Model' for Maritime Security Threat Assessment," in *Lloyd's MIU Handbook of Maritime Security*, ed. Rupert Herbert-Burns, Sam Bateman, and Peter Lehr (Boca Raton, Fla.: CRC, 2008); Torbjorn Thedeen, "Setting the Stage: The Vulnerability of Critical Infrastructures," in *Protection of Civilian Infrastructure from Acts of Terrorism*, ed. Konstantin Frollov and Gregory Baecher (New York: Springer, 2006); Amanda East and Bill Bailey, "Australia's Oil Refining Industry: Importance, Threats and Emergency Response," *Security Management* (2008).
 99. United Nations Office on Drugs and Crime, *Transnational Organized Crime in West Africa*, pp. 26–30; Karin Brulliard, "U.S. Outreach on Rough Seas off Western Africa," *Washington Post*, 21 May 2009.
 100. United Nations Development Programme, *Niger Delta Human Development Report* (New York: 2006), pp. 19–34.
 101. *Ibid.*
 102. For a detailed analysis of these environmental impacts and their concomitant effects on the people of the Niger Delta, see Joseph Effiong, "Oil and Gas Industry in Nigeria: The Paradox of the Black Gold," in *Environment and Social Justice: An International Perspective*, ed. Dorceta E. Taylor (Bingley, U.K.: Emerald Group, 2010), pp. 324–49. See also *Nigeria: Petroleum Pollution and Poverty in Niger Delta*, AFR 44/017/2009 (London: Amnesty International, 2009), available at www.es.amnesty.org/.
 103. See Ubhenin, "Federal Government's Amnesty Programme in the Niger-Delta," p. 182; Sheriff Folarin, "Niger-Delta: Environment, Omani Crises and the State," *Constitution* 7, no. 1 (2007), pp. 37–61; and Effiong, "Oil and Gas Industry in Nigeria."
 104. Folarin, "Niger-Delta"; John Vidal, "Niger Delta Oil Spills Clean-Up Will Take 30 Years, Says UN," *Guardian*, 4 August 2011, www.theguardian.com/.
 105. Sarah N. Katherine, "Piracy in Somalia: Targeting the Source," *Global Security Studies* 2, no. 3 (2011), pp. 22–29; Eric Frecon, "Piracy in the Malacca Straits: Notes from the Field," *International Institute for Asian Studies, Newsletter* 36 (2005).
 106. Generally on the implications of weak naval and policing capability for maritime security, see Martin Murphy, *Small Boats, Weak States, Dirty Money: Piracy and Maritime Terrorism in the Modern World* (London: Hurst, 2010).
 107. "Sub-Saharan Africa," in International Institute for Strategic Studies, *The Military Balance 2012* (London: Routledge, 2012), pp. 421–22.
 108. See "Nigerian Navy Is Underfunded, Former Naval Capt. Tells Senate Committee," *I Paid*

- a Bribe Naija*, 4 June 2013, www.gejites.com/, and “Senate Seeks Better Funding for Navy,” *NBF News*, 18 June 2009, www.nigerianbestforum.com/.
109. “Sub-Saharan Africa,” pp. 447–48.
 110. *Ibid.*, p. 441. See UN Conference on Trade and Development, *Review of Maritime Transport 2012* (New York and Geneva: 2012), p. 44.
 111. “Sub-Saharan Africa,” pp. 411–62.
 112. On the inadequate funding and capability of African navies and coast guards, see Augustus Vogel, *Investing in Science and Technology to Meet Africa’s Maritime Security Challenges*, Africa Security Brief 10 (Fort McNair, D.C.: Africa Center for Strategic Studies, 2011).
 113. Article 100 of UNCLOS provides: “All States shall cooperate to the fullest possible extent in the repression of piracy on the high seas or in any other place outside the jurisdiction of any State.”
 114. See UNCLOS, chap. 4, secs. 4.2.1.2–3; Eugene Kontorovich, “A Guantánamo on the Sea: The Difficulty of Prosecuting Pirates and Terrorists,” *California Law Review* 98 (2010), pp. 243–76; and Diana Chang, “Piracy Laws and the Effective Prosecution of Pirates,” *Boston College International and Comparative Law Review* (2010), pp. 273–88.
 115. See Penal Code of Liberia, 2008, and Code de la Marine Marchande, Togo, 1971, available at the UN Office of Legal Affairs / Division for Ocean Affairs and the Law of the Sea legislation and treaties database: *Maritime Space: Maritime Zones and Maritime Delimitation*, www.un.org/.
 116. See “NIMASA Seeks Legal Backing to Fight Piracy,” *This Day*, 14 February 2013, www.thisdaylive.com/.
 117. See UNSC, *Piracy in the Gulf of Guinea*, p. 5.
 118. For a discussion of the “catch and release” syndrome and the difficulties associated with piracy prosecution in Somalia, see Kontorovich, “Guantánamo on the Sea,” and Elizabeth Andersen, Benjamin Brockman-Hawe, and Patricia Goff, *Suppressing Maritime Piracy: Exploring the Options in International Law* (Washington, D.C., and Waterloo, Ont.: American Society of International Law and Academic Council on the United Nations System, [2009]), available at acuns.org/.
 119. Convention for the Suppression of Unlawful Acts against the Safety of Maritime Navigation, 10 March 1988, Rome, Italy, entry into force 1 March 1992, 156 parties as of 2 December 2010, 1678 UNTS 201 / [1993] ATS 10 / 27 ILM 672 (1988).
 120. Generally on the SUA framework and the suppression of terrorism, see Helmut Tuerk, “Combating Terrorism: The Suppression of Unlawful Acts against the Safety of Maritime Navigation,” *University of Miami International and Comparative Law Review* 15 (2008), pp. 337–67; John F. Frittelli, “Maritime Security: Overview of Issues,” *United States Congressional Research Service*, 5 December 2003; Jose L. Jesus, “Protection of Foreign Ships against Piracy and Terrorism at Sea: Legal Aspects,” *International Journal of Marine and Coastal Law* 18 (2003), pp. 363–400; Malvina Halberstam, “Terrorism on the High Seas: The *Achille Lauro*, Piracy and the IMO Convention on Maritime Safety,” *American Journal of International Law* 82 (1988), pp. 269–92; and Andrew L. Liput, “An Analysis of the *Achille Lauro* Affair: Towards an Effective and Legal Method of Bringing International Terrorists to Justice,” *Fordham International Law Journal* 9, no. 2 (1985), pp. 328–72.
 121. Kontorovich, “Guantánamo on the Sea”; Douglas Guilfoyle, *Shipping Interdiction and the Law of the Sea* (New York: Cambridge Univ. Press, 2009), pp. 254–59.
 122. “Status of Multilateral Convention and Instruments in Respect of Which the International Maritime Organization or Its Secretary-General Performs Depositary or Other Functions: As at June 30 2013,” *IMO: International Maritime Organization*, www.imo.org/.
 123. This has been confirmed in Magnus T. Addico (secretary general of the Maritime Organisation for West and Central Africa), “Maritime Security Threats and Responses in West and Central Africa” (address to the United Nations Open-Ended Informal Consultative Process on Oceans and the Law of the Sea, New York, 23–27 June 2008).
 124. For Nigeria, see “NIMASA Seeks Legal Backing to Fight Piracy.” For Benin, see UNSC, *Piracy in the Gulf of Guinea*. For Cote d’Ivoire and Ghana, author interview with national authorities.

125. See UN General Assembly, Resolution 62/215, "Oceans and the Law of the Sea," 14 March 2008, para. 67; UN General Assembly, Resolution 61/222, "Oceans and the Law of the Sea," 16 March 2007, para. 59; and UNSC, Resolution 1540 [on nuclear, chemical, and biological weapons], 28 April 2004.
126. See ECCAS, Protocole Relatif. Zone A: Angola, Democratic Republic of the Congo; Zone B: Angola, Republic of the Congo, Gabon; Zone D: Cameroon, Equatorial Guinea, Gabon, Sao Tome and Principe.
127. ECOWAS, Final Communique, Forty-Third Ordinary Session of the ECOWAS Authority of Heads of State and Government, Abuja, Nigeria, 17–18 July 2013.
128. See Kamal-Deen Ali and Martin Tsamenyi, "Fault Lines in Maritime Security: Analysis of Maritime Boundary Uncertainties in the Gulf of Guinea," *African Security Review* 22, no. 3 (2013), pp. 95–110.
129. On APS see "About Africa Partnership Station," *Commander U.S. Naval Forces Africa*, n.d., www.c6f.navy.mil/, and Kathi A. Sohn, "The Global Fleet Station: A Powerful Tool for Preventing Conflict," *Naval War College Review* 62, no. 1 (Winter 2009), pp. 45–58.
130. AFRICOM was established in 2007 to focus exclusively on the African continent. See "President Bush Creates a Department of Defense Unified Combatant Command for Africa," *White House*, 6 February 2007, georgewbush-whitehouse.archives.gov/. For an extensive analysis of the background and future of AFRICOM, see David E. Brown, *AFRICOM at 5 Years: The Maturation of a New U.S. Combatant Command*, Letort Papers (Carlisle Barracks, Pa.: U.S. Army War College, Strategic Studies Institute, 2013), and Sean McFate, "U.S. Africa Command: A New Strategic Paradigm?," *Military Review* 88, no. 1 (January–February 2008).
131. European Commission, "New EU Initiative to Combat Piracy in the Gulf of Guinea," press release, Ref IP/13/14, 10 January 2013, Brussels.
132. Benin, Cameroon, Equatorial Guinea, Gabon, Nigeria, Sao Tome and Principe, and Togo.
133. Ghana has, for example, hosted visits by navies of the following states since 2011: Argentina, Belgium, Brazil, France, Germany, Italy, Netherlands, South Africa, Spain, Turkey, the United Kingdom, and the United States.
134. "Chinese Naval Fleet Pays Four-Day Goodwill Visit to Cameroon," *People's Daily Online*, 4 June 2014, english.peopledaily.com.cn/; "Chinese Naval Delegation Visits Cameroon," *DefenceWeb*, 5 June 2014, www.defenceweb.co.za/.
135. The INTERPOL Maritime Piracy Task Force focuses on three main areas, working closely with the international community: countering maritime piracy, investigating incidents, and tracing the proceeds of crime. "Maritime Piracy," *INTERPOL: 100 Years of International Police Cooperation*, www.interpol.int/.
136. "United Nations Security Council, 6723rd Meeting, Monday, 27 February 2012, 10 a.m., New York," S/PV6723 (Provisional), *Security Council Report*, p. 10, www.securitycouncilreport.org/.
137. See UNSC, *Piracy in the Gulf of Guinea*, p. 6. The UN assessment team stated that Benin's monthly contribution to the joint operation, U.S.\$466,000, is only 5 percent of the total cost. This means that the monthly total cost is \$9.32 million, of which Nigeria contributes \$8.85 million. This translates into an estimated annual cost of \$112 million.
138. *World Bank Development Indicators 2010* (Washington, D.C.: World Bank, July 2011); *Africa Competitiveness Report 2011* (Washington, D.C.: World Bank, 2011).
139. A trust fund has been established to support the implementation of the Djibouti Code of Conduct for Combating Piracy in the Indian Ocean and the Gulf of Aden. Japan provided the seed money, after which financial contributions followed from many states, including France, the Republic of Korea, the Marshall Islands, the Netherlands, Norway, and Saudi Arabia. See "Djibouti Code of Conduct Trust Fund," *IMO: International Maritime Organization*, www.imo.org/.

RESEARCH & DEBATE

THE KEY TO MIDWAY CORAL SEA AND A CULTURE OF LEARNING

Carl Cavanagh Hodge

Was the battle of Midway won or lost? In a recent edition of the *Naval War College Review*, James Levy grappled with some of the recurrent issues found in the scholarship of the battle of Midway, all of them related to the question whether one or another aspect of the Japanese way of war led to a catastrophic defeat at the hands of the U.S. Navy.¹ Levy observes that an assumption common to many works is “that the Japanese did as much to lose the battle as the Americans did to win it, or more.”² He takes issue with “cultural” explanations for the outcome of 4 June 1942, specifically the extent to which Japanese war strategy and naval doctrine were descendants of Oriental philosophy and the children of a culture that valued conformity and obedience over creativity and personal initiative. Levy rightly concludes that American “diligence” more than any other single factor contributed to the total destruction of the Japanese carrier fleet sent against Midway.³

Levy devotes special attention to Jonathan Parshall and Anthony Tully’s book *Shattered Sword: The Untold Story of the Battle of Midway*, a work whose scholarly thoroughness he lauds yet one he simultaneously indicts for an obsession with debunking myths about Midway and with demonstrating that its outcome was to

be found in Japanese practice and doctrine.⁴ In the process he gives rather short shrift to the degree to which their account of the early episodes of the war in the Pacific supports his own argument: that the U.S. Navy applied itself diligently and thoroughly to the requirements of carrier warfare in the Pacific, in such greater measure than its adversary that the resulting triumph reversed the

Carl Cavanagh Hodge is a professor of political science at the University of British Columbia, Okanagan. He is a former senior Volkswagen Research Fellow with the American Institute of Contemporary German Studies at Johns Hopkins University and a former NATO-EAPC fellow. Professor Hodge has authored and edited nine books and numerous articles on European and American politics and history.

direction of the Pacific War within six months of its opening gambit at Pearl Harbor. In a careful reading of both engagements, the battle of Midway and the battle of the Coral Sea, one is struck by those specific qualities of the U.S. Navy that in the first six months of the Pacific War made it especially ripe for a major victory over the Imperial Japanese Navy (IJN).

Admittedly, Parshall and Tully level many substantive criticisms against the established scholarly myths about Midway and trace much of the IJN's thought and action to systemic factors derived as much from a way of life as from the practical challenges of modern naval warfare. Yet in this they are in the good company of other works, such as *Kaigun*, by David Evans and Mark Peattie, that locate much of the spirit of Japanese early naval thought in the mystical bent of Akiyama Saneyuki, whose most baleful impact on the IJN of World War II was, ironically, a Mahanian faith in decisive battle that the U.S. Navy no longer shared.⁵ In Levy's effort to make the case for American diligence in preparation for Midway, however, Levy himself fails to pay sufficient attention to a factor appropriately stressed by Parshall and Tully in the introduction and conclusion of their analysis, one that cannot be excluded from any responsible treatment of Midway—the learning culture developed in the white heat of conflict between the battle of the Coral Sea and the battle of Midway. The U.S. Navy's greatest triumph was the product less of Japanese cultural pathologies than of the intellectual profit the Americans gained from the lesser engagement only a month before. For Parshall and Tully, Coral Sea was in many respects the overture to the opera, so much so that what happened at Midway is not wholly comprehensible without an understanding of the outcome of the earlier engagement, as well as of the American and Japanese reactions to it. Any study of Midway ought to acknowledge that the limited encounter of the first instance that exerted decision influence on the main event of the second is not unlike the relationship of the battle of Ligny to Waterloo.

All histories of Midway, of course, acknowledge up front the enormous contribution of the code breakers at Pearl Harbor in giving the U.S. Navy actionable information on the movements of Japanese task forces in the Pacific, along with coherent calculations of the intentions behind them. In the early months of 1942 the U.S. Navy had an emerging image of the overall operational situation in the central and western Pacific, and in the weeks leading up to Midway it was also able to sketch a plausible tactical picture of the coming clash with the IJN. As this knowledge evolved, changes to command structure were also made, the better to integrate intelligence with command. Whereas Admiral Isoroku Yamamoto sailed with the Japanese Combined Fleet to Midway, which is consistent with the custom of decentralized command common to all navies of the time, Admiral Chester Nimitz remained at Pearl Harbor to orchestrate the U.S. Navy's response to the Midway attack. Eliot Cohen and John Gooch note in their study of failure

in war that “Nimitz’s behavior at Midway suggests that the U.S. Navy did not simply refuse to change its traditional attitudes to command, painful as that might prove.”⁶ Yamamoto’s preference for sticking with what he assumed to be the tried-and-true meant that he had all the foggier notion of what awaited him at Midway.

What awaited him, however, had to a significant extent been determined by the outcome of the Coral Sea battle only a month earlier and by the determination of the U.S. Navy to make the most of both the material balance of forces following that battle, and the lessons learned in its prosecution. The battle of the Coral Sea, the first-ever clash of aircraft-carrier fleets, had been occasioned by Japan’s efforts in the first stage of the Pacific War to establish a chain of air bases across the southwest Pacific and to seize Port Moresby on the southern coast of New Guinea, to maintain access to the Coral Sea and any potential targets in northeast Australia. These plans were short-circuited by the U.S. Navy’s Task Force (TF) 17, commanded by Rear Admiral Jack Fletcher. On 7 and 8 May 1942, attacks by Fletcher’s aircraft mauled the Japanese invasion in its opening phase sufficiently to force the postponement of any follow-through on the larger plan. Thus although the Coral Sea fight was a marginal tactical victory for the IJN, in terms of ships and tonnage sunk, it amounted to a small strategic triumph for the U.S. Navy.

However, the material knock-on effects of the Coral Sea conflict were highly significant. At the beginning of 1942 the IJN had a quantitative edge over the U.S. Navy’s carrier force. Japan had six fleet carriers—*Akagi*, *Kaga*, *Hiryū*, *Sōryū*, *Shōkaku*, and *Zuikaku*. In addition, the light carriers *Hōshō*, *Ryujo*, *Shōhō*, and *Zuihō* were available to support operations of the fleet carriers. The United States had five fleet carriers available for operations in the Pacific. The design and capabilities across all classes varied enormously; USS *Lexington* (CV 2) and USS *Saratoga* (CV 3) were converted cruisers dating to the 1920s, whereas USS *Yorktown* (CV 5), USS *Enterprise* (CV 6), and USS *Hornet* (CV 8) were the first genuinely modern fleet carriers. At Coral Sea, Japanese aircraft were able to sink *Lexington* and inflict serious damage to *Yorktown*. In return American aircraft destroyed *Shōhō*.

Parshall and Tully, as well as Craig Symonds in his book on Midway, note that the overall material damage rendered at Coral Sea to the IJN’s fighting capacity went well beyond the ships sunk outright. Although *Shōhō*’s loss was hardly a body blow, the damage to the fleet carrier *Shōkaku* was sufficient to strike it from the roster for the Midway operation, and *Zuikaku* was withdrawn as well, owing entirely to aircraft losses. In this instance a factor intervened in the aftermath of Coral Sea that might be deemed “cultural” but that was, strictly speaking, organizational in nature. Parshall and Tully point out that the IJN could have attempted to reconstitute *Zuikaku*’s air wing in time for Midway but that such a change

would have violated an organizational custom that married Japanese air units to specific carriers. If either a ship or its air wing were not in condition for operations, both were withdrawn. So Coral Sea took one light IJN carrier, *Shōhō*, out of action permanently, while two heavy carriers slated for the attack on Midway, *Shōkaku* and *Zuikaku*, would not be there.⁷ The IJN decided to take four, not six, carriers to its showdown at Midway.

Furthermore, before Coral Sea the Japanese had a wide edge over the U.S. Navy in experienced pilots. At Coral Sea they lost many of their best pilots, while their comparatively green American adversaries gained valuable experience in the art of attacking Japanese carriers.⁸ What Fletcher's force achieved at Coral Sea, therefore, amounted to much more than a short-term check to Japanese strategic plans; it seriously compromised the total strength the IJN could bring to bear against the American carriers at Midway. Paul Dull, in his battle history of the IJN, wonders whether these losses alone might have deprived Japan of the smashing victory at Midway.⁹

Even if one sets aside such speculation, Coral Sea was at the very least an installment on a future defeat. If a cornerstone of Japanese strategic doctrine was to employ overwhelming force and advantage of numbers, Coral Sea sharply reduced that advantage; "if an objective wasn't important enough to require sending all six carriers," Parshall and Tully remind us, "it wasn't worth going after at all," so that "Japan paid the ultimate price for her violation a month later at Midway."¹⁰

That the price at Midway turned out to be so high was the U.S. Navy's achievement, both in making the most of the strategic opportunity that sound intelligence afforded it and in drawing tactical lessons from Coral Sea to maximize the dividend offered by the opportunity at hand. The effect of the IJN's decision to scratch off two carriers from the Midway operation following Coral Sea was compounded by the U.S. Navy's extraordinary efforts to ensure that *Yorktown*, badly damaged but able to escape destruction, would be repaired and refitted in time to rejoin the hostilities. Whereas under normal circumstances *Yorktown* would have required three months to refit, Admiral Nimitz gave the 1,400 fabricators, shipfitters, and welders at the dry-dock facility at Pearl Harbor less than three days of around-the-clock labor in which to patch and replace what they could. The effort drew so much electrical power that some districts of Honolulu suffered outages. Symonds stresses that "whereas Yamamoto assumed that the loss of *Shōkaku* and *Zuikaku* only narrowed the Kido Butai's [carrier force's] margin of superiority, Nimitz knew that if the Americans were to have any chance against the oncoming juggernaut, they would need all three of their carriers."¹¹ By using the available intelligence to contrive an ambush of the Japanese force in Midway's proximity, he improved the odds further. Along with *Enterprise* and *Hornet*, the

presence of *Yorktown* plus the use of the airstrip on Midway Island would give Nimitz four platforms from which to launch aircraft—parity with the Japanese force that at no other time and place in the opening months of the war in the Pacific had been possible.

Meanwhile, the Japanese command assumed that Coral Sea had put both *Lexington* and *Yorktown* out of action. Whether or not one indicts “victory disease” for the overconfidence in proceeding with the Midway operation, the casualness with which the IJN reduced by a third the forces it intended to employ stands in stark contrast to American effort to retrieve *Yorktown* from near death to fighting fitness. It is important to underscore, moreover, that *Yorktown*’s presence at Midway was valuable far beyond the mathematical balance of carriers. Specifically, the experience of *Yorktown*’s aviators at Midway sharpened American air-strike capabilities significantly. John Lundstrom’s study of naval air combat in the Pacific notes that Coral Sea was the first acid test of American naval carrier doctrine. Although there was little time between the Coral Sea and Midway engagements to study and apply the lessons of the former for systematic application to the latter, “the *Yorktown* aviators were the only ones in a position to profit from their hard-earned Coral Sea experiences, and their excellent performance at Midway demonstrated the value of those lessons.”¹² At Coral Sea, American naval fighter pilots had been introduced to the storied A6M Zero fighter, and they had appreciated the remarkable maneuverability of the Japanese fighter while learning that their own F4F-3 Wildcats were its equal in speed and climbing ability and its superior in firepower and protection.¹³ Although *Yorktown*’s air group was reorganized prior to Midway—both to facilitate an increase in overall fighter strength in time for Midway and to integrate the new F4F-4 folding-wing Wildcats into its numbers—leaders such as Lieutenant John S. (“Jimmy”) Thach listened to the accounts of *Yorktown*’s flyers of their Coral Sea experiences. A hastily innovated version of the “Thach Weave” beam-defense position debuted at Midway under the most challenging circumstances and was remarkably effective in meeting Japanese fighter attacks.¹⁴ So, not only was *Yorktown* available for action northwest of Midway Atoll on 4 June 1942, but the experience that its aviators acquired at Coral Sea was integrated into the Midway force through the American mix-and-match approach to carriers and air wings, an approach from which the IJN abstained.

There is no need to engage in discussions of cultural contrasts between American and Japanese naval traditions or to work over the latter for real or imagined strategic pathologies to acknowledge that the United States brought organizational flexibility to the engagement and extracted every ounce of innovative energy in its determination to prevail. Levy’s stress on American diligence is wholly in harmony with Parshall and Tully’s observations that with the overnight

refitting of *Yorktown* the U.S. Navy was already benefiting from superior organizational practices before the trial of strength at Midway.¹⁵ In addition, it mattered a great deal not only that the U.S. Navy was to have a third carrier for Midway but that Admiral Nimitz gave tactical command of the two task forces (TF 16, with *Enterprise* and *Hornet*, and TF 17, with *Yorktown*), joined for the ambush of the Japanese force closing on Midway, to Fletcher—together, a commander and ships with more experience in combat with Japanese carriers than any other combination available.

Owing to combat experience of Coral Sea battle and the efficient launch of torpedo planes, fighters, and dive-bombers of *Yorktown*'s air group, Fletcher's team was the only force to arrive over its target almost exactly according to navigational calculation to deliver a timely and coordinated attack. Torpedo bombers were launched first, followed by dive-bombers, and then, in turn, the fighters. The objective of this procedure, that the three groups would rendezvous before encountering the Japanese, involved a quantum of risk, but *Yorktown* had already rehearsed en route with considerable success at Coral Sea. Other American carrier aircraft formations at Midway flew in small groups and became separated, but *Yorktown*'s remained closely coordinated, "with each of the tactical elements remaining in sight of each other up until the time they initiated their attack."¹⁶ Because *Yorktown*'s dive-bombers, to their own amazement, came upon the Japanese carrier *Sōryū* without the cover of any combat air patrol (CAP), their attack was devastating. Seventeen SBD Douglas Dauntless dive-bombers, under Lieutenant Commander Maxwell Leslie, scored three hits on *Sōryū* with thousand-pound bombs, destroying its flight deck and gutting its hangar below.

In combination with the destruction of *Akagi* and *Kaga* by the dive-bombers of TF 16, the IJN lost three of its four carriers (and the battle of Midway) in scarcely more than five minutes of action.¹⁷ Because dive-bombers from *Enterprise* had initially been unable to locate the Japanese carriers and had arrived over them from the southwest almost at the same time as Leslie's strike force arrived from the east, the Japanese carriers were caught from two directions at the moment of maximum vulnerability, when their flight decks were covered with aircraft preparing for launch. Not only did the U.S. Navy air groups approach from separate axes at approximately the same time, but they came in at high and low altitudes, presenting the Japanese air defenses with a challenge beyond their capability. Although coincidence accounted for this (what Parshall and Tully call "a healthy dollop of bad luck"), the impression among the Japanese that the U.S. Navy had such accurate knowledge of their position that it could synchronize attacks from different directions must have been psychologically devastating.¹⁸ It was certainly materially catastrophic.

Other factors, then, contributed directly or indirectly to the scale of the American triumph. Among them were the improvements made to the U.S. Navy's combat air patrol, based in part on the failure of American fighters at Coral Sea to break up Japanese strike forces before they could close in on the American carriers. Fighter direction and CAP at Midway were more effective (Task Force 16 escaped attack entirely) when the idea of a layered CAP, aircraft operating at different altitudes, was applied to carrier defense. Even after Midway, American CAP required further development, principally through multicarrier task forces with highly integrated CAPs, but the effort to learn and adapt from recent experience was very much in evidence among the American fighters on 4 June 1942. By contrast, the IJN's CAP did not improve significantly between Coral Sea and Midway and did little to compensate for Yamamoto's misty appreciation of his enemy's dispositions around Midway. Admittedly, Japanese pilots had to operate without the early-warning capabilities of radar; still, as Parshall and Tully point out, relatively simple tactical improvements could have improved the defense of the IJN's carriers.¹⁹ One cannot help but be struck by the fact that the IJN's CAP in no way compensated at the tactical level for Japan's inferior operational intelligence, so that the ambush effect hoped for by the U.S. Navy's command unfolded largely as planned.

The limitations of the damage-control practices on board Japanese carriers, meanwhile, ensured that once the American dive-bombers scored major hits, the chances of recovering operational effectiveness diminished quickly. We have here another instance of contrast with the learning culture of the U.S. Navy following Coral Sea. It was at Coral Sea that Oscar Myers, *Yorktown's* Air Department fuel officer, realized that among the factors that sealed the unhappy fate of *Lexington* was the presence of aviation fuel on its hangar deck. Because the U.S. Navy thereafter drained fuel systems after usage and filled the lines with CO₂, *Yorktown* was spared the ravages of a runaway fire when it absorbed a major Japanese dive-bomber assault. The patched-up *Yorktown* was actually more resilient under attack at Midway; the carrier that had contributed so much to the U.S. Navy's heroic struggle in 1942 ultimately succumbed not to bombs but to torpedoes. Fifteen aircraft from *Yorktown's* bombing group were able to participate in the retaliatory strike from *Enterprise* that began the destruction of *Hiryū*, the fourth and last IJN carrier at Midway.²⁰ Lastly, the extraordinary performance of the U.S. Navy's torpedo bombers and dive-bombers must be noted—the former sacrificed in the battle's opening phase to annihilating attacks from Japanese fighters while the latter delivered the fatal blows to the IJN's carriers when there were comparatively fewer Japanese fighters to meet them. Indeed, *Yorktown's* third bombing group was unruffled by fighters during or after its attack. After

initial misses, the American dive-bomber pilots settled into a rhythm of multiple hits with five-hundred-pound and thousand-pound bombs on such vital parts of the Japanese carriers that even appropriate damage control would have been hard pressed to save them.

Above all, it is Levy's point about diligence (a point not missed, and indeed stressed, by Parshall and Tully) that needs to be underscored. A culture of learning, arising from experience rather than theory and shared in the weeks between Coral Sea and Midway at every level of the U.S. Navy's carrier task forces, meant that ultimately victory was earned by the Americans rather than thrown away by the Japanese. Levy is right to conclude that military historians are too quick to apportion blame. An almost perverse fascination with failure often seems to mark qualification for the profession. I do not share his aversion to cultural explanations for behavior in battle any more than I share the attraction of others to such explanations. Cultural factors are simply harder to measure and less satisfying as an explanation than is a careful reconstruction of what actually happened. I do share Levy's enthusiasm for Eric Grove's scholarship on the Philippine Sea, and I recommend that his stress on technology and training be applied to Midway, along with emphasis on the extraordinary application of hard-won knowledge in evidence in the U.S. Navy in the early months of the Pacific War.²¹ This knowledge was remarkably on duty at all levels: Chester Nimitz's courage in acting on the intelligence in his possession, to toss the iron dice on a fight as big and potentially disastrous as Midway, was complemented by the decisions of Fletcher and Spruance (in a knife-edge balance of prudence with bravery) to launch air strikes before they had perfect knowledge of the enemy's position and intentions. Their commitment to tactical conviction, however, was in turn redeemed by the tenacity, skill, and personal sacrifice of the U.S. Navy's bombers, scout planes, and F4F pilots in delivering a staggering blow to Japanese carrier-borne airpower. John Keegan points out that for Midway, American cryptanalysts provided a picture "as clear as the obscurities of war will ever allow" but that a little less intuition by the pilots engaged to act on it might have compromised that advantage.²² Happily, the recent experience of Coral Sea in aerial reconnaissance, tactics of aerial combat, and techniques of dive-bombing made that intuition especially acute. Whereas the years between 1909 and 1941 witnessed the rise of Japanese naval airpower, the spring of 1942 marked the beginning of its sudden and steep decline.²³

Nothing in the actions of the U.S. Navy indicates that its personnel believed God was on their side at Midway and so all would simply be well; to the contrary, every fiber of arm, heart, and brain was applied to narrowing the advantage of a foe who had hitherto seemed invincible. If there was a "miracle" at work at Midway, then surely it was that the U.S. Navy, at every level, drew all the right

conclusions from one engagement for application to the next. Any familiarity with military history teaches us that this virtue is so rare as to tempt the conclusion that, if not the Almighty, then surely Sweet Reason intervened wholly to the benefit of one side.

NOTES

1. James P. Levy, "Was There Something Unique to the Japanese That Lost Them the Battle of Midway?," *Naval War College Review* 67, no. 1 (Winter 2014), pp. 119–24.
2. *Ibid.*, p. 120. The works cited are Gordon Prange, *Miracle at Midway* (New York: Penguin, 1983); Paul S. Dull, *A Battle History of the Imperial Japanese Navy, 1941–1945* (Annapolis, Md.: Naval Institute Press, 1978; repr. 2007); Douglas Smith, *Carrier Battles: Decision in Harm's Way* (Annapolis, Md.: Naval Institute Press, 2006); Ronald Spector, *At War at Sea* (New York: Viking, 2001); H. P. Willmott, *The Barrier and the Javelin* (Annapolis, Md.: Naval Institute Press, 1983); and Harry Gailey, *The War in the Pacific* (Novato, Calif.: Presidio, 1996).
3. Levy, "Was There Something Unique to the Japanese That Lost Them the Battle of Midway?," p. 122.
4. Jonathan Parshall and Anthony Tully, *Shattered Sword: The Untold Story of the Battle of Midway* (Washington, D.C.: Potomac Books, 2005).
5. David C. Evans and Mark R. Peattie, *Kaigun: Strategy, Tactics, and Technology in the Imperial Japanese Navy, 1887–1941* (Annapolis, Md.: Naval Institute Press, 1997), pp. 67–74, 504–17.
6. Eliot A. Cohen and John Gooch, *Military Misfortunes: The Anatomy of Failure in War* (New York: Free Press, 2006), p. 86.
7. Craig L. Symonds, *The Battle of Midway* (New York: Oxford Univ. Press, 2011), p. 174; Parshall and Tully, *Shattered Sword*, p. 65.
8. Symonds, *Battle of Midway*, p. 175.
9. Dull, *Battle History of the Imperial Japanese Navy*, p. 129.
10. Parshall and Tully, *Shattered Sword*, pp. 422–23.
11. Symonds, *Battle of Midway*, p. 192.
12. John B. Lundstrom, *The First Team: Pacific Naval Air Combat from Pearl Harbor to Midway* (Annapolis, Md.: Naval Institute Press, 1984), p. 300.
13. *Ibid.*
14. *Ibid.*, pp. 317, 353–56.
15. Parshall and Tully, *Shattered Sword*, p. 94; Symonds, *Battle of Midway*, pp. 184–85.
16. Parshall and Tully, *Shattered Sword*, p. 217.
17. Lundstrom, *First Team*, pp. 340–61.
18. Parshall and Tully, *Shattered Sword*, pp. 217–18.
19. *Ibid.*, p. 407; Lundstrom, *First Team*, pp. 303–305, 323, 443.
20. Parshall and Tully, *Shattered Sword*, pp. 325–26.
21. Levy, "Was There Something Unique to the Japanese That Lost Them the Battle of Midway?," p. 123; Eric J. Grove, *Sea Battles in Close-Up* (Annapolis, Md.: Naval Institute Press, 1993).
22. John Keegan, *Intelligence in War: Knowledge of the Enemy from Napoleon to Al-Qaeda* (New York: Knopf, 2003), p. 252.
23. Mark Peattie, *Sunburst: The Rise of Japanese Naval Air Power, 1909–1941* (Annapolis, Md.: Naval Institute Press, 2001), p. 174.

A STRATEGY HAS TO BE ABLE TO WORK TO BE MASTERFUL

Alan D. Zimm

This essay was written in response to an article by Angelo N. Caravaggio, “‘Winning’ the Pacific War: The Masterful Strategy of Commander Minoru Genda,” which appeared in the Winter 2014 issue of the *Naval War College Review* (pages 85–118).

Dr. Caravaggio takes to task “criticisms leveled at the Japanese for their ‘ill conceived’ or ‘poorly planned’ attack at Pearl Harbor on 7 December 1941.” Since his endnote supporting this comment listed only my *Attack on Pearl Harbor: Strategy, Combat, Myths, Deceptions* as a source of this criticism, the finger appears to be pointed directly at me. Understandably, I was eager to learn more of Genda’s masterful strategy and to learn how I had missed Genda’s “depth of vision and professional intellect.” I was disappointed.

Dr. Caravaggio’s article never substantiates his view that Genda’s planning for the Pearl Harbor attack was in any way masterful. None of my criticisms were addressed, nor was there any explanation of how my analysis was inaccurate. I found no evidence in the article of any strategic planning created by Genda—only a few suggested courses of action that the author assumes were masterful, without any real evaluation as to their feasibility.

Genda was the lead planner for the Pearl Harbor strike. In my previous life as a commander in the U.S. Navy, performing exercise analysis, I gained some experience in evaluating and criticizing operational planning. I found Genda’s plan full of poor decisions, with some outright blunders, even considering the state of the art of the time.

If Dr. Caravaggio contends that the attack was not “poorly planned,” he will need to address the deficiencies that I have identified in *Attack on Pearl Harbor*—twenty-one specific, major problems. The following are a few of the most significant that are related to planning.

Commander Zimm is a member of the Johns Hopkins University Applied Physics Laboratory’s principal professional staff, serving as section leader in the Aviation Systems and Advanced Concepts Group. He has published over ninety books and articles on various subjects, including naval and military history. His most recent book, Attack on Pearl Harbor: Strategy, Combat, Myths, Deceptions, was published in 2011.

- Genda’s plan for the torpedo bombers employed a horrendously complicated target-prioritization scheme that could not have been executed even under the best of conditions. It resulted in an overconcentration on two battleships, as well as other targeting errors. One-third of the torpedo hits were wasted on inappropriate targets or in overkill.

- The prioritization scheme assigned primary (battleship) and secondary (cruiser) targets. There was enough force to allocate killing firepower to six of the eight battleships and all the cruisers. The plan, however, provided for no positive command and control over the attack as a whole, with the result that not one torpedo bomber intentionally attacked a cruiser, and only one bomb hit a cruiser.
- The approach formation chosen by the planners for the torpedo bombers was dangerously wrong. The torpedo bombers did not approach in a mutually supporting defensive formation but rather in long, one-at-a-time, line-ahead “strings.” The heavily loaded aircraft, flying “low and slow” in this formation, would have been appallingly vulnerable had there been any U.S. fighters over the harbor—even a few of the obsolete P-26s based in the area.
- The torpedo bombers’ formation did not allow for anything other than “follow me” leadership, which contributed to poor target selection.
- Due to a lack of practice (another of the planner’s responsibilities) and a poor means to communicate which attack plan had been selected, the torpedo bombers spread and straggled, with aircraft intervals as large as five hundred to 1,200 yards instead of the planned one hundred yards.
- The torpedo attack lacked simultaneity. The bomber strings attacked one at a time. An attack that should have taken ninety seconds stretched into eleven or twelve minutes, allowing time for more antiaircraft (AA) gunners to get into the action. Five of the last seven torpedo bombers were shot down. Had there been any warning, this would have likely been near the loss rate for the entire torpedo force.
- No contingency plan was provided should the carriers be absent, other than “find another target.” Some pilots misidentified USS *Utah* and wasted torpedoes on this demilitarized target ship. Others aborted their runs and chose other attack routes to other targets.
- Attack routes conflicted. Many routes crossed within groups and among groups. When the aircraft assigned to attack carriers went for other targets, the result was several near collisions, causing attack runs to abort and one aircraft to jettison its torpedo. The reattacks allowed more time for the defenders to shoot them down. This was the fault of the planners, not the aviators.
- Admiral Isoroku Yamamoto’s objective was to sink battleships (the symbol of sea power) and thereby inflict a shock to the morale of the American people to induce them to come to a negotiated peace. Genda undermined his boss’s

objective by disproportionately assigning torpedo and dive-bombers to strike carriers.

- No fighter “top cover” was assigned. The few U.S. fighters that managed to get aloft had clear runs at Japanese bombers.
- No fighters were assigned to escort the main effort—that is, the torpedo bombers—to the harbor. The fighters broke off to strafe airfields, leaving the torpedo bombers undefended for the last ten to twenty miles of their approach.
- The plan assumed clear visibility and unlimited (CVU) weather conditions. The dive-bombers were trained in an attack technique that required CVU weather up to twelve thousand feet. When the second-wave dive-bombers encountered dense clouds between three and five thousand feet, they could not bomb, and their bombsights were not capable of lower-altitude glide-bombing. As a result, the dive-bombers’ hit percentage was miserable. Only two hits were scored on targets appropriate to the dive-bombers’ 250-kilogram general-purpose bombs by the seventy-eight bombers that arrived over the harbor. Their only “kill” was the naval shipyard “gedunk” wagon, which was eviscerated, scattering ice cream and pies all over a quay near Honolulu. If the dive-bombers had performed as expected, with the firepower they had they could have sunk all the cruisers in the harbor. As it was, they scored only one hit on a cruiser—again, a result of poor anticipation by the planners, not poor execution by the aviators.
- The plan, as briefed, included sinking a ship in the channel if one was found under way. The second-wave dive-bombers found the battleship USS *Nevada* under way, and probably fourteen to eighteen dive-bombers attacked it, scoring five hits with bombs that did not have the capability to penetrate the ship’s deck armor. The ship sank, but owing to damage-control and design errors, which the Japanese could not have anticipated (and for which they should not be given credit). The planners knew that these bombs were not lethal against battleships and that it would normally take over sixty such hits to produce any expectation of sinking one, yet they planned for it anyway—a waste of bombs.
- The planners did not make the elementary calculation needed to determine whether a sunken battleship could actually block the channel. As it was, even if a ship had sunk at a right angle to the channel and in the exact center, the channel was wide enough to allow ships to pass in either direction.
- There was no planned suppression of enemy air defenses, though the Japanese employed such techniques in China. U.S. AA was a major factor in

disrupting the attack and reducing weapons-delivery accuracy to well below expectations.

- The planners assumed they would achieve surprise. There were no contingency plans should surprise be lost, even though they knew that the carrier force would attack the island even if it had been sighted as much as twenty-four hours in advance. It was not until the day before the force departed Japan, when Admiral Yamamoto reminded its crews of the quality of their opponents and “the snare of overconfidence,” that the planners realized their plan was not robust enough to deal with conditions other than those envisioned by their initial, rigid, assumptions. En route to the launch point, the planners cobbled together an inadequate “no surprise” contingency plan. The means by which it would be communicated to the first-wave aircraft, while en route to the target, which plan was to be executed—by firing flares—was not well considered. The flare signal was misinterpreted by some of the force, which resulted in a string of blunders that caused the attacking formations to lose all cohesion in their approach, while other elements executed the wrong plan.

Overall, the attack force had the killing capacity to destroy or sink six battleships and eight cruisers, with additional overkill hits available to ensure this result. The killing ordnance (actual hits delivered that were sufficient to destroy or sink the target) destroyed or sank only three battleships. The attack achieved 21 percent of its potential.

This was a poorly planned attack. It does not reflect any particular depth of vision or professional intellect. Dr. Caravaggio’s statement that any shortfalls in the results arose because Genda’s plan was “just not executed as originally envisioned” is specious. Most of the faults of execution can be traced to deficiencies in planning. It is possible that the author was referring only to masterful strategic-level planning, but the text of his article is not clear on this. In Genda’s initial evaluation of the idea of an attack on Pearl Harbor, he suggested that the strike be followed by the invasion and capture of Oahu. Dr. Caravaggio chides those who vetoed this idea, as if they had rejected a war-winning strategy. However, he does not mention why the Naval General Staff originally dismissed it.

A member of the Naval General Staff Planning Section, Captain Shigenori Kami, was asked to investigate an invasion of Hawaii. Kami found that the islands were not self-sufficient in food, noting that 2,900,000 tons had been shipped there in 1941. He calculated that, under Japanese occupation, thirty ships a month would be required to feed the population, with another thirty ships a month for military supplies. Considering the distance of the routes and the turnaround times (as well as potential losses from submarines), far more than

sixty ships would have been required, ships that Japan did not have. The Japanese military had taken over two million tons out of commercial service to support its offensive, which it intended to return before their absence could cripple the industrial effort; to withdraw half a million tons permanently was not supportable, and the scheme would have presented a stream of targets that would have been an American submariner's dream. A discussion of this study can be found in John Stephan's *Hawaii under the Rising Sun: Japan's Plan for Conquest after Pearl Harbor* (2002), cited in the article's endnotes. The Japanese rightly rejected the idea of invading Oahu at the outset of the war. If they had taken Hawaii, they could not have held it. This strategic idea was not masterful; it had no depth of vision, because it did not consider what had to follow.

My own criticisms of the Pearl Harbor strategy are that the attack displaced an existing plan around which the Japanese navy was designed and built and that it forced the United States into a course of action that would nearly guarantee a Japanese defeat.

The Japanese fleet was designed around a concept wherein the U.S. fleet would be lured to the west, escorting the large amphibious force required to retake the Philippines. The American fleet would be subject to attrition by submarines, long-range aviation, carrier strikes, and destroyer and cruiser night torpedo attacks. After inflicting significant losses, the Japanese expected to close and crush the U.S. fleet in a battle-line engagement. With the U.S. fleet annihilated (as the Russians' had been at Tsushima), there would follow, the Japanese assumed, a favorable negotiated peace.

Their dilemma was that this plan had to be carried out early in the war, before the vast American industrial capability could develop. The Japanese calculated that the Americans were building three to five tons of warships for every ton coming out of Japanese yards and that by 1944 the fleet tonnage ratio would be ten to three. The Japanese needed to lure the Americans into a decisive battle quickly, while the fleets were roughly comparable.

However, if the Japanese attack on Pearl Harbor succeeded, they knew, the Americans would not come early. There would be no incentive for the Americans to engage in decisive battle until their fleet was repaired and reinforced to overwhelming strength. The strategic mechanism for victory, then, was changed from that of annihilating the U.S. fleet to undermining the morale of the American people by sinking a few battleships at Pearl Harbor—a strategy forced on the Japanese by Yamamoto. They rationalized the new strategy as “protecting the flank of the southern advance,” when in fact a successful attack on Pearl Harbor would negate Japan's only potential war-winning strategy. Dr. Caravaggio does not address this analysis or explain why he believes the strategy of an attack on Pearl Harbor reflects depth of vision by Commander Genda.

Genda originally suggested that the Japanese carriers remain off Hawaii and deliver follow-on strikes to “deny the use of Pearl Harbor as an operating base.” In my book, I calculate that, optimistically, a follow-on strike would destroy at most 6 percent of the area of the naval shipyard, and I point out that there was significant regeneration capability in the tenders and civilian shipyard at Honolulu. Even further reattacks would not eliminate Pearl Harbor as a base; the Japanese carrier magazines simply did not carry enough ordnance. I would also nudge the author toward the calculation of probable losses by the Japanese attackers from AA and any residual fighter capacity. The Japanese carrier force could easily lose half to three-quarters of its aircraft and pilots in repeated vain attempts to put out of service a base that could be readily regenerated. Considering that the Japanese had few aviators in reserve and a painfully small and inflexible pilot training program, such losses certainly would have changed the course of the war in the Pacific, putting half or more of the Japanese carriers out of service for six months for lack of pilots. In addition, the idea of remaining off Oahu for repeated strikes discounts the American submarine capability. There were four submarines in Pearl Harbor at the time of the attack, with others operating in adjoining training areas. These submarines, even with defective torpedoes, could have severely discomfited the Japanese fleet or any convoy of amphibious and support ships, especially considering the poor Japanese antisubmarine warfare capability. Lastly, the Japanese striking force simply did not have the fuel to hover off Oahu, nor did it have a logistics train that could support extended forward operations far from bases.

A strategy has to be able to work to be masterful.

Dr. Caravaggio seems also to believe that it would be possible to take Oahu with two (later revised to three) Japanese infantry divisions. He does not identify where these divisions would be obtained, along with the eighty-odd ships required for their transport, and more for their sustainment. The Japanese Three-Phase Offensive was stretched thin in troops and vessels, and Japan’s operations in the Philippines, Indochina, and the Netherlands East Indies were only possible through careful staging and reuse of merchant ships in each succeeding wave of landings. The Imperial Army had refused to provide additional divisions to attack what it saw as naval objectives.

The author appears to agree with Genda’s assessment that taking Hawaii would be a “knockout punch.” Yamamoto had considered this strategy and thought that having 400,000 American citizens under his control would bring the United States to the negotiating table. As in the case of his belief that sinking four battleships at Pearl Harbor would break the Americans’ morale, I suggest that this idea is flawed. The capture of Oahu would likely have further enraged the American population, possibly to the extent that the “Germany first” strategy would be

abandoned and U.S. forces concentrated instead against the Japanese. Considering that most of the Japanese gains in the first phase of the war were due to a vacuum of U.S. and British power, it is likely that, had U.S. air, ground, and naval assets been directed initially against Japan, Japan would have been overwhelmed earlier, resulting in a stay of execution for Germany but a disaster for Japan.

As noted, the author seems to accept that two or three Japanese infantry divisions could overcome Oahu's two defending U.S. Army divisions, each with two regular and one National Guard regiment. Japanese infantry divisions were not well suited to combat against opponents heavy in firepower, as the 80 percent losses suffered in 1939 at Nomohan against the Soviets demonstrated, as did the failure of Japanese wave attacks during the Guadalcanal campaign. The lack of Japanese artillery would not be made up by shore bombardment or by close air support, as the Japanese ships and carrier aviators were not trained, equipped, or supplied for these roles. As for the prospects of success through a flanking strategy, traversing a mountain chain on the eastern side of Oahu (as mentioned approvingly in the article), Japan's lack of success using a similar strategy in New Guinea, along the Kokoda Trail, is well known.

Which brings us to what the article contends is the "opportunity lost"—Genda's proposal after Pearl Harbor to collect troops from Guam, survivors of the Wake Island assault force, and forces earmarked for the seizure of Rabaul and redirect them to invade Midway and Johnston Islands. Dr. Caravaggio contends that this "plan" is a "clear [indication] of [Genda's] impressive ability to connect the strategic imperative with the tactical necessity."

I would have been more impressed with Genda's "strategy" (really, an off-the-cuff suggestion, with little thought to feasibility) if there had been a more detailed look at the practicality of the suggested actions. From where were the ships coming that would move these troops? Where were the logistics, and the intelligence? Was there sufficient force to carry off multiple opposed amphibious operations successfully?

The Japanese did not have a good record of opposed amphibious assaults. The first landing at Wake Island was repulsed, the landings at Rabaul succeeded only on beaches where they were unopposed, and the invasion of the Philippines at Lingayen Gulf was nearly stymied by a single .50-caliber machine-gun post.

The Rabaul invasion force was embarked on 14 January 1942. This is the earliest date on which Genda's proposal could have been put into motion. There was no shipping to pick up the troops occupying Guam without displacing other Japanese movements, a very unlikely option. American reinforcements to Midway began 17 December, and additional infantry, coastal batteries, and anti-aircraft were in place by 26 December, while reinforcements were in motion for Johnston. (See Glen Williford's *Racing the Sunrise: Reinforcing America's Pacific*

Outposts, 1941–1942, published in 2010, for more on the reinforcement of the Pacific Islands after Pearl Harbor.) Genda’s “strategy” would not strike a vacuum. It was impractical and not within the capabilities of the available forces.

The Japanese showed throughout the war that they lacked flexibility and were less effective when operating outside preestablished plans. Genda’s strategic suggestion took no account of Japanese capabilities to execute the idea or of potential U.S. countermeasures. Dr. Caravaggio would have a difficult time convincing any U.S. Marine that a pickup team of Japanese soldiers without local intelligence or proper assault or logistics planning, short on landing craft, and with no particular preparation or advance planning could have taken and held these islands.

It is easy to say an idea is brilliant, divorced from messy questions regarding feasibility. But details of practicability are important. Genda could just as well have suggested an invasion of Los Angeles or the capture of Washington, D.C. Both would have been brilliant coups and would have changed the course of the war, but would have been masterful strategies only if they had potential to succeed.

However, Dr. Caravaggio is to be praised for bringing attention to the interviews between Gordon Prange and Genda and the other Japanese officers. He has brought forward some new information to the historical community. Yet I would caution readers to be careful in accepting the accompanying analysis. Dr. Caravaggio’s effusive praise for Genda’s strategy needs scrutiny before that strategy can be accepted as masterful.

BOOK REVIEWS

WARTIME RELIGION

Jenkins, Philip. *The Great and Holy War: How World War I Became a Religious Crusade*. New York: HarperOne, 2014. 438pp. \$29.95

The roots of today's sectarian-fueled conflicts lie in the First World War. By igniting "a global religious revolution," the "Great War" redrew the world's religious map both figuratively and literally. Modern Islam, characterized as "assertive, self-confident, and aggressively sectarian," is a direct result, but so too are the spread of charismatic Christianity in Africa, an invigorated Zionism that led to the eventual creation of the modern state of Israel, and even the "efflorescence of esoteric and mystical ideas that we often summarize as New Age." So argues Philip Jenkins. Like other recent authors, Jenkins claims that the Great War in effect "created our reality." This book, however, is noteworthy for placing the war's political, social, and cultural elements, and effects, within an explicitly religious context.

Jenkins, distinguished professor of history and member of the Institute for the Study of Religion at Baylor University, has written an ambitious and highly readable book. Synthesizing military, cultural, and religious history and drawing principally from a vast body of secondary literature,

the book is admirable in its reach even when it exceeds the author's grasp.

By focusing on the religious dimensions and consequences of the war, this book fills a historiographical gap, one in which wartime religion is commonly regarded as "irrelevant . . . window dressing" with "each side cynically appropriat[ing] God to its own narrow nationalist causes." Instead, Jenkins takes seriously the decidedly religious worldview that informed the war's belligerents. While there were national and religious disparities (for example, where Orthodox Russians cast the war in traditional "crusade" language, British rhetoric emphasized a "war for Christian civilization"), a common religious vocabulary of sacrifice, holy war, divine mission/mandate, crusade, and cosmic battle, marked by both apocalyptic fears and millenarian hopes, was widely shared across national and faith-group boundaries.

In Jenkins's view, it was these war-fueled expectations and the ensuing wartime cataclysm that fundamentally shaped the postwar world. A more secularized Europe was a reaction to wartime religious excesses, even as that same "rhetoric of

the holy war and holy nation” coupled with apocalyptic ideas to “metastasize” into “Fascism, Nazism, and racial extermination.” So too was the Russian Revolution a religious civil war, the Bolshevik cause as messianic and millenarian in vision as it was antireligious in doctrine. Anti-imperial and anticolonial movements in Africa and elsewhere were also parts of this postwar “worldwide millenarian upsurge.” Similarly, the war led to a proliferation of “charismatic, fundamentalist, [and] traditionalist forms of faith” within Judaism, Christianity, and Islam. Moreover, the defeat and geographical division of the Ottoman Empire created not only the modern Middle East but also, according to Jenkins, modern Islam. The loss of a geopolitical center and the caliphate resulted in a “postwar search for new sources of authority [that] led to the creation or revival of virtually all the Islamic movements that we know in the modern world.”

Like many of the book’s broadest claims, this last one falls a little short. Still, Jenkins’s book is important and timely. The Great War might not have been a “war of religion” per se, but Jenkins shows how for its participants it was certainly religious. Most of all, Jenkins reminds us, as sectarian fighting continues over national boundaries drawn following that century-old war, of the continued relevance of religion’s global effects.

BRAD CARTER
Naval War College



Manicom, James. *Bridging Troubled Waters: China, Japan, and Maritime Order in the East China Sea*. Georgetown Univ. Press, 2014. 280pp. \$54.95

As the world reacts to an increasingly powerful and assertive China, East Asia’s maritime frontiers are emerging as friction points that threaten regional stability. James Manicom’s *Bridging Troubled Waters* presents a timely analytical history of Sino-Japanese relations in the East China Sea and makes important contributions to understanding the prospects for maritime cooperation. The book authoritatively documents new insights regarding this complex state of evolving affairs, one that has included elements of cooperation, compromise, competition, and conflict. It employs a helpful analytical framework from which to argue for optimism, by demonstrating that Chinese and Japanese leaders have historically been able to manage tensions by decoupling material issues from strategic and symbolic differences. Manicom has a PhD from Flinders University in Australia and is an expert in East Asian security, specializing in maritime issues. A research fellowship at the Ocean Policy Research Foundation in Tokyo and trips to China and Japan positioned him well to deliver this systematic analysis.

Manicom constructs a unique matrix for evaluating the value of maritime space vis-à-vis national objectives and applies this construct to motivations for cooperation versus conflict. Manicom then uses this framework to interpret case studies from the Sino-Japanese maritime relationship, examining the dispute over islands in the East China Sea, fisheries management, agreements governing research at sea, and cooperative arrangements in the Chunxiao gas field. Building on the insights delivered by these case studies, the book’s final chapter and conclusion focus on the current political dynamics in the Sino-Japanese maritime relationship and

assess the prospects for successful management of tensions through a shared-jurisdiction arrangement that satisfies both countries' territorial objectives.

The book is a densely packed, academic work. The opening chapter, in which Manicom lays his theoretical foundations and analytical framework, will demand particular effort from readers seeking immediate, practical insights. However, this academic investment is well worth the effort. The follow-up analysis is exceptionally insightful for not only academics but also policy makers, strategists, and military professionals. Its tone, however, reflects the fact that the author did most of his research in Japan (only five of the twenty-six interviews were conducted in Beijing), and Manicom seems intermittently challenged to shake a Japanese perspective.

A more significant shortfall is that the book qualifies its strong case for optimism with two significant caveats. First, Manicom notes that past cooperation has only resulted when "material issues have been separated from the more symbolic aspects of [Sino-Japanese] relations" and that the countries have the greatest difficulty finding paths to cooperation over contested symbolic and strategic issues. Second, he qualifies his optimism also by stating that tensions will be sufficiently managed to prevent war only so long as "the leaders of each state can exercise the necessary leadership to manage their respective national pressures." These caveats are of great concern, because leaders in both nations may find it increasingly difficult to manage the growing nationalistic demands of their constituents. Furthermore, because the years of cooperative efforts expertly documented in Manicom's case studies have taken the edge off

many of the material issues, the remaining tension points are predominantly strategic and symbolic in nature. Still, despite these criticisms, the lessons contained in Manicom's insightful analysis will be of great value to those seeking to understand Sino-Japanese tensions and other maritime disputes.

CDR. JOHN BRADFORD
Commanding Officer, USS Stethem (DDG 63), and
LT. JOELLE PORTZER
USS Stethem



Westad, Odd Arne. *Restless Empire: China and the World since 1750*. New York: Basic Books, 2012. 515pp. \$32

The Norwegian historian Odd Arne Westad, in this well-written history of China over the past 250 years, tells the story from a broad global perspective. His approach tracks that of his earlier works on the Cold War, where he placed a binational rivalry into a larger world context. Similarly in this work, he sees the principal driver of China's modern experience as relentless internationalization. However, China is more than just a country. It is, as Lucien Pye once described it, "a civilization-state, pretending to be a nation-state." Imperial in every respect, it pushed out, and the world has pushed back, powerfully, since 1750.

However, the adjective "restless" in the title is an understatement. No country's modern history has been more tumultuous or more violent. Westad describes episodes, including the worst, that occurred in the time of "peace" that the Communist regime was supposed to usher in. The most deadly and destructive of modern China's encounters with the world, Westad astutely notes, was between 1937 and 1945—its war with

Japan. In a campaign breathtaking in its brutality, Japan destroyed China's nascent republic, enabled the victory of the Communists in their civil war with the Nationalists, and destroyed the old imperial order in Asia. Thus, the new China was born into a world of many possibilities. Unhappily, none of the good ones, either domestically or internationally, was realized until 1979, when China's current "rise" can be said to have begun.

Westad's fine account of what has come before brings us to realize that the rise of China will not necessarily have a calming effect on either the Chinese people or on others who live nearby. Since 1750, "internationalization," though not entirely a one-way street, has been mostly that; now, the restless empire, once in a defensive crouch, is moving out smartly in all directions. Perhaps this should be expected of a "civilizational state," except that today's China offers to the world nothing of what it once did—no high culture, no attainments in intellectual and philosophical life, and certainly no models for wise and effective governance. Instead, as Westad helps us see, the current regime is thrashing around, which makes its own future, as well as the futures both of its "near abroad" and of the world at large, hard to predict.

Empires, we have been taught, are supposed to bring peace, but today's Middle Empire ruled from today's Beijing displays many indications that it is bent on becoming a major disturber of the peace. Yet even under a more enlightened outlook, there would be challenges: the Middle Empire borders on three nuclear-weapons states—Russia, India, and Pakistan—and probably also a fourth, North Korea. Even so, from his own well-informed examination of

China's modern experience Westad concludes that prospects for peace remain—not a ringing vote of confidence in the powers that be in Beijing, but neither is it a wholly despairing outlook. After all, Westad is an accomplished historian of the Cold War, the nonviolent, freedom-enhancing outcome of which reminds us that things do not always turn out badly.

CHARLES HORNER
Senior Fellow, Hudson Institute
Washington, D.C.



Twomey, Christopher P. *The Military Lens: Doctrinal Difference and Deterrence Failure in Sino-American Relations*. Ithaca, N.Y.: Cornell Univ. Press, 2010. 240pp. \$35

It has been said that "weapons speak to the wise—but in general they need interpreters." *The Military Lens*, written by political scientist Christopher P. Twomey, associate professor at the Naval Postgraduate School, in Monterey, California, shows the difficulty of that quote. Twomey makes a strong case that differing military languages and doctrines explain otherwise puzzling examples of deterrence failure and escalation.

The Military Lens is a welcome addition to the literature on deterrence, which too often treats actors as interchangeable "black boxes." Twomey writes in the spirit of authors who, like Robert Jervis, explore psychological factors that led to misinterpreting the actions of others. Twomey's work adds the new factor of military doctrine. Every military has its own doctrine, or "theory of victory," its vision of how military resources are to be used to achieve operational success. Twomey's core argument is that strategists look through a doctrinal "lens" when assessing capabilities

and intentions and that this weakens deterrence in two ways: the credibility of others' threats is discounted, because their doctrines are thought to be ineffective, and the others' signals are missed by the use of one's own doctrine as a template for indicators. This attention to misperceptions at the level of operational net assessment is new and of direct relevance to planners and analysts.

Much of the book tests the author's theory against three Korean War-era episodes: China's failure to deter U.S. movement north of the thirty-eighth parallel, American failure to deter China from entering the war, and the less well-known maritime story of how the United States prevented a planned Chinese invasion of Taiwan. Twomey also traces how greatly the United States and the People's Liberation Army (PLA) underestimated each other's land warfare capabilities and as a result issued threats that neither considered credible. The PLA Navy, with officers largely educated abroad, understood that U.S. air supremacy rendered landings impossible. The choice of the 1950 Korean cases was wise, as most variables other than PLA army/navy differences are constant. A notable feature of the case studies is archival research, both in the United States and in China; fresh documentation alone will appeal to Korean War specialists.

Doctrinal difference fits the Korean War, but the radical divergence of the revolutionary PLA and atomic American military makes this a relatively easy case, as Twomey acknowledges. How often do doctrinal differences generally lead to deterrence failures? An additional chapter on two Arab-Israeli cases argues that deterrence failure is correlated with doctrinal divergence. The evidence is suggestive, but the book could be

strengthened by a larger universe of cases that may answer such additional questions as these: Are doctrinal differences more common in ground than naval warfare, for example? Do opponents in long-lasting rivalries (compared to the United States / People's Republic of China in 1950) fare better at assessing the others' capability despite differing doctrines?

The Military Lens offers a warning that clear, credible threats may not be understood as such by others. Since doctrinal misperceptions take place at the military level, the lessons here are particularly relevant to planners, as they develop assessments and deterrent options for civilian leaders. This work also holds implications for professional military education, stating as it does that officers should be encouraged to overcome doctrinal filters, that scholars should study foreign doctrines, and that educational exchanges might reduce misunderstandings (the author himself is involved in U.S.-Chinese dialogues). Perhaps weapons speak a common tongue, but Twomey reminds us that militaries need to be fluent in multiple languages.

DAVID BURBACH
Naval War College



Kane, Tim. *Bleeding Talent: How the U.S. Military Mismanages Great Leaders and Why It's Time for a Revolution*. New York: Palgrave Macmillan, 2012. 271pp. \$27

This book provides a critical analysis and highlights a dysfunctional U.S. Army officer personnel management system. The author explains why the best and brightest young officers depart early for civilian careers and what can be

done to encourage them to remain on active duty. Kane also outlines why the military's leadership training is so successful and admired by civilian industry.

Tim Kane's background as an Air Force veteran and successful entrepreneur with a PhD in economics gives him the perspective, skill, and insight to offer a comprehensive evaluation of the current system and a blueprint for the future.

Kane conducted an online survey of West Point graduates from six different classes at different stages of their careers. Overall, it was a balanced sample, with approximately 250 respondents, both military and civilian. Based on the results of a first survey, Kane conducted a follow-up to gain additional insight. The results highlight many reasons why young leaders leave the service, and Kane suggests what can be done to curb the exodus.

Kane proposes an alternative to the current All Volunteer Force (AVF)—what he calls the “Total Volunteer Force” (TVF). He posits that there is a “philosophical difference between the current system, which gives people freedom to choose only at the moment of volunteering [the AVF], and a system in which employees are free every day.” Kane's book is unique in that it offers possible alternatives to many of the Army's current personnel policies that young leaders despise. It is relatively easy to criticize bureaucratic policies without offering solutions, but Kane does offer solutions, which the Army has already begun to implement. For example, Kane proposes allowing officers a break in service to enter civilian industry, after which they can return to the military without prejudice—a policy that the Army recently embraced.

One of Kane's major criticisms of the military is that officer promotions, unlike their civilian counterparts, are based more on year seniority than on merit. “It is fair to say that selection to general is highly competitive, but the reality is that longevity is a bigger factor than merit in determining who makes that rank.” The result is that in an effort to make the officer assignment process as fair as possible the system has become outdated and less than optimal for officers and commanders alike. Kane's TVF proposes promotions based on merit and assignments and using a market mechanism—that is, an internal job market, in which officers apply for any open job.

As a retired Army colonel with almost thirty years of active-duty service, many of them as a personnel officer, I was skeptical when I started reading this book. It is difficult to criticize something when you have been a part of the problem. However, I found that Kane has skillfully proposed a series of recommendations that could make a difference. *Bleeding Talent* is a must-read for all on active duty today. Kane's writing style and method of presenting counterarguments make for thought-provoking proposals that merit consideration in today's Army.

THOMAS GIBBONS
Naval War College



Northrup, David. *How English Became the Global Language*. New York: Palgrave, 2013. 220pp. \$24

In this slim volume David Northrup, a retired Boston College professor of history, gives a clear and concise account of the development of English into the twenty-first century's one truly global

language. First he traces how English became the predominant language in the British Isles, overcoming such rivals as Cornish, Welsh, and Gaelic. Then he looks at how English spread throughout the British colonies that eventually became the United States and Canada. Finally, Northrup analyzes the culminating phase of the globalization of English and its rise to its current status as the lingua franca of the modern world.

To account for this worldwide penetration Northrup points to a number of related developments, especially the way English has become the indispensable medium of international communication in science, business, and higher education. Northrup identifies the meteoric growth of the World Wide Web as the most important factor in spreading English to every corner of the globe.

To his credit, Northrup rejects the easy and fashionable narratives that view the globalization of English as a worldwide cultural disaster and the success of English as one more instance of the West's cultural imperialism. Northrup shows that the spread of English has not necessarily involved the death of other languages. By learning English, in fact, people around the world are generally becoming more bilingual and even trilingual; as Northrup correctly insists, the global diffusion of English is more a matter of "pull" than of "push." To be sure, some governments have mandated the learning of English. However, the "push" of governments has been less successful than the "pull" of people all around the world who simply want to learn the language to make their lives better. Northrup rejects the common view that people are passive with respect to language, that they just sit around waiting to have languages imposed

on them by fiat. Instead, Northrup sees people everywhere taking active roles in their own educations, eagerly embracing English in the hope that it will allow them to trade more freely with the international community, to keep up with the latest developments in science, technology, and popular culture, and to take advantage of the remarkable educational opportunities available in the English-speaking world.

Language is thus a prime example of what the Austrian economist Friedrich Hayek calls "spontaneous order." Spontaneous orders are the result of human action but not of human design. That means that many orderly phenomena in human life, such as the famous "invisible hand" of the market, result not from government central planning but from the seemingly chaotic interaction of widely dispersed people pursuing their individual self-interest yet in the process producing a larger public good.

Language is a human institution that no one plans in advance but that grows out of the active usage of millions of individuals. As Northrup shows, attempts by linguistic experts to create a global language "scientifically" have failed completely, most notably in the case of Esperanto. Despite all the efforts to promote it, even official recognition from UNESCO in 1954, Esperanto has basically languished in the realm of faculty lounges and parlor games. Contrary to the conspiracy theories of postcolonialist pundits, no central authority set out to make English the global language that it is today. Some accidents of colonial history were undoubtedly involved in the process, such as the fact that Britain ruled over the populous Indian subcontinent for several centuries. Yet if English had not appealed to millions

of individuals around the globe on its own, the language would never have achieved the preeminence it now enjoys.

Unfortunately, Northrup's book could have profited from better copyediting and proofreading. It has far too many errors of grammar and spelling (on the order of "Isaac Azimov" instead of "Isaac Asimov"). Ironically, in view of its subject, too much of the "research" is straight from the Internet. I did not expect to see so many citations to

Wikipedia in a scholarly publication.

These problems aside, *How English Became the Global Language* offers a good introduction to its subject for the general reader, who will come away from the book with a better grasp of what brought about the globalization of English and what it means for the world's future.

PAUL A. CANTOR

*Clifton Waller Barrett Professor of English
University of Virginia*

IN MY VIEW

NEARLY VERTICAL?

Sir:

While Lieutenant Commander Maksim Y. Tokarev's article "Kamikazes: The Soviet Legacy" (*Naval War College Review*, Winter 2014) was extremely informative regarding the history and theory behind Soviet anti-carrier doctrine, his analysis of Japanese kamikaze tactics appears flawed with regard to his comments about dive bombing. While kamikaze pilots may have made near-vertical dives at times, such maneuvers were counter to Japanese doctrine as described by Rikihei Inoguchi in his book *The Divine Wind: Japan's Kamikaze Force in World War II* (Naval Institute Press, 1958, paperback 1994). As stated by Inoguchi,

In a high-altitude approach, caution must be taken to insure that the final dive angle is not too steep. In a long steep dive, as the force of gravity increases, a plane is more difficult to pilot and may go out of control. It is essential, therefore, to make the dive as shallow as possible, taking careful note of wind direction and the movement of the target.

The majority of kamikaze pilots received just enough flight training to be able to take off and fly straight and level. For such untrained pilots to attempt a steep dive would most likely have resulted in a loss of control. Thus, the Imperial Japanese Navy's strategy, as illustrated on page 91 of *The Divine Wind*, was to approach the target ship in a shallow glide, attacking in a 45 degree dive from an altitude of 1,000–2,000 meters. It is likely that the near-vertical dives alluded to by Tokarev were kamikaze pilots falling out of the sky. In contrast to his statement, dive bombing accuracy is increased the closer an aircraft can be brought to the near vertical.

THOMAS WILDENBERG

Tucson, Arizona

OF SPECIAL INTEREST

RECENT BOOKS

A selection of books of interest recently received at our editorial office, as described by their publishers:

Marquet, L. David. *Turn the Ship Around! A True Story of Turning Followers into Leaders*. New York: Penguin, 2012. 236pp. \$25.95

When David Marquet, captain of USS *Santa Fe*, unknowingly gave an impossible order, his crew tried to follow it anyway. It was then that Marquet realized he was leading in a culture of followers. No matter your business or position, you can apply Marquet's radical guidelines to turn your own ship around. The payoff: a workplace where everyone around you is taking responsibility for their actions, where people are healthier and happier, where everyone is a leader.

Milqueen, Michael, Deborah Sanders, and Ian Speller. *Small Navies: Strategy and Policy for Small Navies in War and Peace*. Burlington, Vt.: Ashgate, 2014. 247pp. \$109

From Confederate commerce raiders in the nineteenth century, to Somali pirates today, even the most minor of maritime forces can become a key player on a global stage. Examining a broad range of examples, this volume addresses the roles and activities of small navies in the past and present, in particular of the different ways in which such forces have identified and addressed national and international security challenges and the way in which they interact with other navies and security agencies.

Santi, Federico. *The Newport Naval Training Station: A Postcard History*. Atglen, Pa.: Schiffer, 2013. 79pp. \$19.99

In the late nineteenth century, at the site of an old asylum for the poor on Coaster's Harbor Island, off the city of Newport, Rhode Island, local residents made a decision that would change American military history forever—they proposed that the ninety-acre island become a U.S. Naval Training Center and the future home of the Naval War College. Postcards and other artifacts document physical changes over time. The collection in this book shows all the facets of life on the base.

Aboul-Enein, Youssef H., ed. *Reconstructing a Shattered Egyptian Army: War Minister General Mohamed Fawzi's Memoirs, 1967–1971*. Annapolis, Md.: Naval Institute Press, 2014. 231pp. \$64.95

The memoirs of General Mohamed Fawzi, Egyptian war minister from 1967 to 1971, were first published in 1984, but never translated from Arabic and therefore remained undiscovered by most English-speaking readers. Aboul-Enein, an American naval officer and established scholar whose personal and professional background gives him a unique vantage point, is determined to bring to life the military thoughts of this Arab war minister as part of his mission to introduce America's military leaders to Arabic works of military significance.

REFLECTIONS ON READING

Professor John E. Jackson of the Naval War College is the program manager for the Chief of Naval Operations Professional Reading Program.

This is the twenty-fifth article in the “Reflections on Reading” series to appear in the *Naval War College Review* since the Navy Professional Reading Program (NPRP) was established in 2006. A great deal has occurred in world affairs over this period, and there have been major upheavals in the world of publishing. During the June 2006 meeting at which the initial NPRP was approved, a preproduction model of a Sony e-reader was demonstrated to the Chief of Naval Operations. The new technology was being touted at the time as “seeking to do for the written word what the iPod has done for digital music.” Little did any of us know the tremendous impact that e-readers would have on book writing, production, and distribution within a few short years. The purpose of what is now known as the Chief of Naval Operations Professional Reading Program (CNO-PRP) is to encourage sailors of all ranks to *read*—and also to *write*. Reading can help to shape ideas and mentally refine concepts, and writing can help solidify ideas and share them with others. The digital-book revolution has facilitated our sailors’ ability to perform both tasks.

To Read. In today’s world, if you want to read, you really don’t have to spend much money. This is true in society at large, and it is particularly true within the Navy. The no-cost options include borrowing hard-copy books from your CNO-PRP library on ships and stations throughout the Navy (well over a hundred thousand hard-copy books have been distributed since the program began); borrowing e-books from the Navy General Library Program, accessible through the Navy Knowledge Online (NKO) portal; and downloading them (as loans or on a permanent basis) from a number of public sites. For example, the *Digital Book Index* offers 140,000 free books, and Project Gutenberg offers over forty-six thousand titles. With high-quality, portable e-readers widely available for less than a hundred dollars you can gather an impressive personal library at minimal cost. One of the most remarkable aspects of e-books is that they can be downloaded virtually instantly wherever an Internet connection is available. That means the assembled knowledge of the centuries is available with a few

keystrokes, a situation that would have astounded even the most learned individuals only a generation ago.

To Write. No story illustrates the changing nature of the book publishing process better than that of the brilliant science-fiction writer Hugh Howey. In July 2011 he offered an e-book novella, *Wool*, for sale via Kindle Direct Publishing, for ninety-nine cents. Traditional publishers had been largely uninterested in the book, but self-publication in e-book form turned out to be a superior option. His fascinating postapocalyptic story about the remnants of human society in huge underground silos began to sell quickly, and Howey set about expanding the smaller work into a full-fledged book, which went on sale as a digital download in January 2012. By summer 2012 he was selling up to thirty thousand downloads a month, bringing in a monthly salary of \$150,000. Two subsequent titles completed the *Wool* trilogy and introduced Howey's other clever books to a huge audience. When traditional publishers ultimately came to him, offering exclusive publishing contracts, Howey negotiated deals unheard-of in the industry, whereby he sold the hard-copy rights but retained rights to the digital format, which he has continued to market directly to savvy readers.

The secret to e-publishing is the same as it is in the print world—quality sells. Howey's success is by no means typical, but it does demonstrate what is possible. If you have a manuscript, fiction or nonfiction, that you would like to publish, you can do so in a matter of hours utilizing programs such as Amazon's Kindle Direct Publishing, Smashwords, or Barnes and Noble's Pubit. Authors have virtually complete control of their work, and they receive up to 70 percent of all sales revenue. The big payoff is that your book becomes available to millions of potential customers, and you can take pleasure in knowing that your ideas could change the world. You can even offer your thoughts as free downloads, potentially reaching an even larger audience.

In August 2008, Admiral Jim Stavridis (now retired from the Navy and dean of the Fletcher School of Law and Diplomacy at Tufts University) wrote, "So, dare to read and develop your understanding. Carve out the time to think and form new ideas. Dare to speak out and challenge assumptions and accepted wisdom if your view differs from them. Have the courage to write, publish, and be heard. Launch your ideas and be an integral part of the conversation." We hope that the CNO-PRP assists our sailors in the challenge so eloquently set forth by Admiral Stavridis.