

Struck by bomb in Battle of Bismarck Sea,
Japanese merchantman burns fiercely,
March 2, 1943 (U.S. Army/National
Archives and Records Administration)



Attaining Maritime Superiority in an A2/AD Era

Lessons from the Battle of the Bismarck Sea

By Ben Ho

Great Power competition is back after a hiatus of over a quarter of a century since the end of the Cold War. The United States has acknowledged this fact with the release of the 2017 National Security Strategy and the 2018 National Defense Strategy, which speak of revisionist powers

such as China and Russia seeking to challenge the current U.S.-led world order.¹ These two documents are in line with what various individuals in and outside of the U.S. defense establishment have been asserting in recent years about the state of international geopolitics. For instance, former Chief of Naval

Operations Admiral John M. Richardson contends in the 2016 *A Design for Maintaining Maritime Superiority* that “Russia and China both have advanced their military capabilities to act as global powers,” adding that their “goals are backed by a growing arsenal of high-end warfighting capabilities, many of which are focused specifically on our vulnerabilities.”² In the same vein, the 2018 edition of this strategic document, *Version 2.0*, notes that “China

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and Russia seek to accumulate power at America's expense and may imperil the diplomatic, economic, and military bonds that link the United States to its allies and partners and that "while rarely rising to the level of conflict, Chinese and Russian actions are frequently confrontational."³

Admiral Richardson also stresses in the 2016 document that naval combat must address "'blue-water' scenarios far from land and power projection ashore in a highly 'informationalized' and contested environment."⁴ This contested environment is invariably framed by the antiaccess/area-denial (A2/AD) challenge that Beijing and Moscow pose to U.S. maritime dominance. Indeed, Admiral Richardson stresses in *Version 2.0* that the U.S. military's "competitive advantage has shrunk and in some areas, is gone altogether."⁵

How best to deal with this state of affairs has been a major debate in the U.S. national security community in recent years. Defense thinkers often look to history to solve current military problems, and insights from a less popular but crucial engagement during World War II in the South West Pacific Area (SWPA) could guide Pentagon leaders toward mitigating this threat. This is the almost forgotten Battle of the Bismarck Sea of March 2–4, 1943, which saw Allied airpower decimating the Japanese convoy designated Operation 81 in the waters off New Guinea.⁶

Three insights from the battle stand out:

- land-based aircraft can play a key role in maritime interdiction
- we must innovate and improvise to deal with current and urgent problems
- the enemy should be overwhelmed with multidomain threats.

While one can argue that the Allies at the Bismarck Sea engagement were more akin to the A2/AD force by today's definition of the term, their actions during the battle and the lessons learned are relevant to today's counter-A2/AD forces. After all, the concept of A2/AD can work both ways. To illustrate, while the submarine

Map. Battle of the Bismarck Sea



Japanese ship movements (black) and Allied air attacks (red) during the battle

Source: Douglas MacArthur, *Reports of General MacArthur: Japanese Operations in the Southwest Pacific Area*, vol. 2, pt. 1 (Washington, DC: Government Printing Office, 1994), plate 51.

is widely regarded as the quintessential access-denial platform, it can be similarly deployed to circumvent the A2/AD barrier. In the same vein, while Beijing may employ an A2/AD strategy to keep enemies far away from its shores, the concept can be turned on its head to keep the People's Republic of China bottled up within the so-called First Island Chain.⁷ This article begins with a brief account of the Battle of the Bismarck Sea and then works through the three lessons delineated above with brief policy recommendations vis-à-vis each of them.

Historical Narrative

Despite the overwhelming success of the Americans at the Battle of Midway, the Japanese were still a force to be reckoned with in the Pacific after June 1942, especially in the SWPA of operations where they were ensconced in several key bases such as Rabaul. In August 1942, the United States went on the strategic offensive, with Marines capturing Guadalcanal in the Solomon Islands. Over the next 6 months, the Americans were embroiled in a fiercely fought campaign that saw both sides taking heavy losses, but that the United States ultimately won. Concurrently, and

several hundred kilometers away, the Allies were fighting to defend the crucial New Guinean city of Port Moresby that could be used to threaten Australia should it fall into Japanese hands. With the successful defense of Port Moresby, the Allies went on the offensive in New Guinea with the goal of neutralizing Rabaul. Following the decision in January 1943 to withdraw from Guadalcanal, Tokyo decided to focus its efforts in the SWPA on the New Guinea campaign. Therein lies the strategic context of the Battle of the Bismarck Sea.

General Douglas MacArthur called the Battle of the Bismarck Sea "one of the most complete and annihilating combats of all time."⁸ Similarly, one Japanese navy captain termed his country's defeat in the battle as "unbelievable," adding that "never was there such a debacle."⁹ Operation 81 consisted of eight troop transports and a similar number of destroyers as protective escorts.¹⁰ There were 6,900 Japanese soldiers traveling with the convoy from Rabaul, and they were meant to be reinforcements for the vital garrison in Lae, New Guinea, from which imperial forces were trying to halt the Allied offensive in that former Australian territory (see map). Some 100 Japanese fighter planes



Part of cowling for B-25 bomber motor is assembled in engine department of North American Aviation's plant in Inglewood, California, October 1942 (Library of Congress/Alfred T. Palmer)

provided air cover for the convoy, though the numbers overhead differed at various times. Operation 81 was detected on March 1, 1943, and almost 100 U.S. and Australian bombers attacked the convoy in the following days.

When the smoke had cleared, all the transports and four destroyers had been sunk. Of the 6,900 Japanese troops with the convoy, only 1,200 made it to Lae, while another 2,700 were rescued and returned to Rabaul, from where they had come. The rest were killed. On the other hand, the Allies lost only a handful of aircraft. The Battle of the Bismarck Sea was Japan's last air offensive in the SWPA, and it set the stage for the Allied offensive in that theater from June 1943 onward.

One scholar opines that the battle was the turning point of the protracted New Guinea campaign, calling it the campaign's "Midway."¹¹ In the same vein, the authoritative postwar *U.S. Strategic Bombing Survey* notes that regarding the SWPA, "From 1 March 1943 to the end of the war, the enemy remained on the defensive, strategically and tactically, except for desperate counterattacks by separate and isolated units."¹²

Lesson One: Land-Based Aircraft Can Play a Key Role in Maritime Interdiction

This lesson is especially relevant today given the debate over how the United States could best fight for sea control

during a conflict with a Great Power. One student of the Bismarck Sea engagement contends that it "still stands as a striking example of the deadly effectiveness of land-based air power against naval targets."¹³ As the Allies did not have any aircraft carriers or major surface combatants in the area of operations at that time, aircraft flying from New Guinea bases undertook the task almost entirely of interdicting Japanese convoy Operation 81. Prior to the battle, the in-theater Allied air forces that comprised the U.S. Fifth Air Force and Royal Australian Air Force Command had a mixed record in attacking ships.¹⁴ The Battle of the Bismarck Sea changed that, and using

tactics employed during the engagement, the Allies prevented subsequent Japanese attempts at reinforcing their positions in New Guinea.

While the Battle of the Bismarck Sea arguably marked the apogee of land-based aviation in the antisurface warfare (ASuW) role during World War II, there were also several other cases of terrestrial airpower successfully attacking ships during that conflict. Witness the deadliness of the Luftwaffe's Focke-Wulf Fw 200 Condor during the initial stages of the Battle of the North Atlantic. This medium bomber posed such a threat to Allied convoys that British Premier Winston Churchill called it the "scourge of the Atlantic." Indeed, two retired senior U.S. Navy officers, Wayne P. Hughes and Robert P. Girrier, assert that Luftwaffe head Hermann Goering's focus on land operations meant that "the service did not take as seriously the ship-attack remit."¹⁵ Consequently, "the possibility that Germany might wake up to the opportunity haunted the harried Royal Navy throughout much of the war."¹⁶ In the Pacific theater, Japanese navy medium bombers flying from Indochinese bases decimated British Force Z with the sinking of the *Prince of Wales* and *Repulse*, marking the first occasion where capital ships were sunk by aircraft while they were under way at sea. Allied land-based bombers proved equally devastating during the campaign to retake the Philippines from the Japanese. At the November 1944 Battle of Ormoc Bay, U.S. Army Air Force (USAAF) medium bombers inflicted substantial losses on a Japanese troop convoy.

Moreover, the significance of Allied land-based airpower in the ASuW role during the Pacific War is often understated as it is commonly believed that sea-based aviation was the key player in this respect. To be sure, carrier planes were behind the destruction of much of the imperial fleet. The *U.S. Strategic Bombing Survey* reveals, however, that land-based aircraft accounted for 14.5 percent of Japanese merchantmen losses, which is only slightly lower than the corresponding figure of 16.3 percent for carrier aviation.¹⁷ The toll on Japanese

commercial shipping exacted by shore-based airpower is higher when accounting for the fact that sea mines, laid mainly by USAAF B-29 bombers, accounted for another 9.3 percent.¹⁸

Land-based airpower proved its worth in ASuW during World War II, and Pentagon thinkers would do well to bear this in mind and let it complement U.S. naval power in the quest to attain maritime dominance in this age of Great Power rivalry. Terrestrial airpower could help in efforts to nullify the surface warship component of an adversary's A2/AD system. After all, land-based aircraft possess a number of advantages over their sea-based counterparts, especially in terms of range and payload. To illustrate, the mainstay U.S. naval strike fighter, the F/A-18E/F Super Hornet, can deploy with a few antiship missiles out to several hundred kilometers away. In stark contrast, the Air Force's intercontinental-ranged B-1B Lancer can carry up to 24 of the newly inducted long-range antiship missiles (LRASMs). With the Lancer set to remain in service into the early 2030s, the United States will retain a potent long-range ASuW capability for over a decade with the B-1B/LRASM combination. Indeed, given the increasing significance of the maritime domain, joint force chiefs should also seriously consider the possibility of arming the upcoming B-21 Raider strategic bomber with antiship weapons such as the LRASM.

Another shortfall that sea-based air has is that U.S. carrier strike groups (CSGs) may not be located near a crisis spot and may require a few days' steaming to reach their destination. With midair refueling, Air Force long-range bombers based even in the continental United States can, however, provide presence, albeit temporary, in most parts of the world within half a day. To be certain, critics can argue that heavy bombers like the B-1B by themselves are highly vulnerable to enemy fighters, but the long striking reach of their weapons (such as the LRASM) would enable them to stay farther out within any A2/AD envelope. Moreover, the socioeconomic well-being of America's key strategic rival, China, is highly dependent on keeping its sea

lines of communication open. Indeed, the vast expanses of the Pacific Ocean and the limited number of friendly bases in that theater—for instance, Guam is over 2,000 kilometers away from the East and South China seas—would mean that there will be a premium placed on the extended striking reach of Air Force "heavies."

As much of the *Joint Concept for Access and Maneuver in the Global Commons* (JAM-GC) is classified, one may never know the true extent to which the Air Force is involved in the maritime interdiction portfolio. What is known, however, is that the Air Force has not been practicing maritime strike frequently since the end of the Cold War.¹⁹ This state of affairs should be addressed. Hughes and Girrier maintain that the neglect of dedicated training to this mission during World War II had contributed to the limitations of land-based air against shipping during that conflict.²⁰ This situation could well replicate itself during a conflict involving the United States and a Great Power adversary. Given its long-range bomber capabilities, the Air Force should therefore seek to entrench itself more firmly in the ASuW business. The introduction of a standoff shallow-water mine capability to its B-52 complement that was shown during Exercise Valiant Shield 2018 is a step in the right direction, as was the integration of the LRASM with the Air Force's B-1B bombers.²¹

What should follow naturally from this is perhaps new iterations of the Resultant Fury exercise that was held in 2004 and demonstrated the capability of Air Force heavy bombers to attack moving targets at sea with laser-guided bombs.²² Future Resultant Fury-like drills would do well to incorporate the LRASM and more challenging conditions so as to simulate a major war contingency. Such are the options provided by a long-range bomber force. In fact, the noted defense analyst Robert Haddick has argued rather heretically for the U.S. Navy to possess such a capability to better counter China's burgeoning A2/AD edifice.²³ In the same vein, other commentators, echoing former Deputy

Defense Secretary Robert Work, have called for the B-1B being transferred to the Navy as a “sea control bomber” that focuses on maritime strike rather than being retired in the 2030s.²⁴

Lesson Two: Innovate and Improvise to Deal with Current and Urgent Problems

The next takeaway from the Battle of the Bismarck Sea is that innovation and improvisation could be key in allowing one side to gain an edge in military competition. The battle is noted for the perfection of emerging tactics that Allied fliers adopted against Japanese vessels. One innovative tactic used was skip-bombing, whereby an airplane dropped its bombs from a low altitude so that their forward trajectory would make them skip along the sea surface like a stone and impact on the side of the enemy ship. To be sure, skip-bombing was not entirely new, as the British had used it in the European theater with some success; however, the first decisive use of this tactic had to be credited to the Allies who perfected it during the Battle of the Bismarck Sea.²⁵ Allied airmen also modified the B-25 Mitchell medium bomber to help it suppress enemy antiaircraft fire as it made its low-level attacking run. This involved installing eight forward-firing 0.50-caliber machine guns on the plane that enabled it to carry out a combination strafing/bombing attack. The A-20 Havoc light bomber was similarly modified to have six 0.50-caliber weapons firing ahead. Prior to this, heavy bombers such as the B-17 Flying Fortress were used in the low-level antishipping role in the SWPA, but they were vulnerable to antiaircraft fire given their lack of forward-firing guns to suppress enemy gunners.²⁶

The results of these innovations were devastating for Operation 81, as the strafing runs of these up-gunned bombers caused significant topside casualties and damage among Japanese ships, leaving them more vulnerable to bombing runs. Writing about the U.S. contribution to the Battle of the Bismarck Sea, Matthew Rodman fittingly notes that “the battle

was a testament to adaptability,” adding that “the weapons and tactics perfected in the first months of 1943 were a tremendous success because Fifth Air Force’s airmen quickly and willingly adapted themselves and their aircraft to the battle at hand.”²⁷

The lesson from this aspect of the Bismarck Sea engagement vis-à-vis the counter-A2/AD discourse is that innovating and making do with what one has on hand could make much operational sense because they could mitigate—at least in the short term—some of the shortfalls that the U.S. Navy is currently facing. There are currently doubts over the survivability of U.S. CSGs in the face of modern A2/AD capabilities. For instance, there is much talk about U.S. carrier strike aircraft lacking the range to strike at an adversary without exposing their motherships to threats.²⁸ The Navy has taken steps to address this capability gap with the upcoming MQ-25 Stingray unmanned aerial tanker, but it will take many years before it comes into active service. Reinstating the mothballed S-3 Viking to serve as an aerial tanker is another sensible measure being put forth to mitigate the A2/AD conundrum,²⁹ as is the proposal to retrofit the SM-6 surface-to-air missile to the F/A-18 Hornet to enhance its counter-air capabilities.³⁰ In the same vein, introducing the airborne early warning and control variant of the V-22 Osprey is one way to enhance the survivability of U.S. amphibious forces against access-denial threats.³¹ Seemingly heretical ideas, such as that of converting merchant ships into cruise missile shooters, should also be assessed.³² After all, in an operationally challenging and uncertain milieu like today’s, all options should be considered.

What is viable about such proposals is that they are not about the introduction of entirely new capabilities—a process that is invariably drawn out and expensive—but about making do with what one has at hand. In a nod to this line of reasoning, the National Security Strategy contends that “Where possible, we must improve existing systems to maximize returns on prior investments.”³³ Similarly, Admiral Richardson stresses in *A Design*

for Maintaining Maritime Superiority that due to budgetary pressures in the foreseeable future, “[we] will not be able to ‘buy’ our way out of the challenges we face,” adding that “the budget environment will force tough choices but must also inspire new thinking.”³⁴ And new thinking was exactly what the Allies in the SWPA did in March 1943, much to the detriment of Japanese convoy Operation 81. Modern U.S. Armed Forces have gone down this path of innovation and improvisation before, with one good example being the transformation of four *Ohio*-class strategic submarines into cruise missile platforms. Modifying the SM-6 surface-to-air missile to have a ship-attack capability is another.³⁵ At the end of the day, while it is well and good to have new platforms and systems, there is a need to, in the words of former Chairman of the Joint Chiefs of Staff Joseph Dunford, “get the right balance between today’s capabilities and tomorrow’s capabilities so we can maintain that competitive advantage.”³⁶

All in all, the Battle of the Bismarck Sea shows how having bold thinkers who can improvise and overcome the challenges presented by the enemy on the battlefield is a force multiplier. However, in today’s dynamic and rapidly advancing world, technologies that are new today could be outdated and replaced in a year or two, so there is a definite need for thinkers who can keep pace with these changes or even think one step ahead in the quest to attain and maintain the edge. In this light, the following observation cannot be truer: “Innovative teams and individuals able to integrate current resources in new ways or to creatively make the most of technological advances are critical for corporate and government success in solving wicked problems. . . . If we cannot find those solutions, others will do so and lead the way into a disruptive future.”³⁷

Lesson Three: Overwhelm the Enemy with Massed and Multidimensional/Vectored Threats

Robert Kaplan once stated, “Never provide your adversary with only a few



Air Force B-1B Lancer, assigned to 37th Expeditionary Bomb Squadron and deployed from Ellsworth Air Force Base, South Dakota, lands at Andersen Air Force Base, Guam, as part of continuous bomber presence mission, December 4, 2017 (U.S. Air Force/Richard P. Ebensberger)

problems to solve . . . because if you do, he'll solve them."³⁸ Several decades before the noted strategic affairs commentator made this point, U.S. and Australian fliers coupled this maxim of overwhelming the enemy together with the innovations just described to devastate Japanese forces during the Battle of the Bismarck Sea. Therein lies the third and final lesson from the battle vis-à-vis maintaining U.S. maritime dominance: joint force leaders should draw up operational concepts that leverage mass and different dimensions to defeat the enemy in a sea-control fight. In other words, they should harness cross-domain synergy, which, in the words of Sam J. Tangredi, is "the ability to strike the enemy simultaneously or sequentially from dominant positions in all combat mediums or domains in such a way that operations in each domain provide mutual support for each other."³⁹ This synergy (or lack of it) will determine the outcome of any scenario

involving antiaccess and counter-anti-access forces, he stresses.⁴⁰

While the Bismarck Sea encounter does not evince a *cross-domain* approach in the true sense of the term given its predominant airplane-versus-ship nature, it does show the benefits of a multidirectional modus operandi. During the battle, Allied aircraft executed their coordinated attacks from various heights to befuddle as well as diffuse enemy defenses. To illustrate, there were aircraft dropping ordnance from medium altitude. While these bombs were less likely to hit Japanese vessels, the convoy was forced to break defensive formation and take evasive action.⁴¹ This essentially "kicked the door open" for the devastating skip-bombing and strafing runs at low altitudes. According to the official Royal Australian Air Force (RAAF) release on the battle, "Enemy crews were slain beside their guns, deck cargo burst into flame, superstructures toppled and burned" as a result of strafing runs by

RAAF Beaufighters.⁴² The effectiveness of the multipronged Allied attacks was such that one pilot described Japanese defensive fire at his plane during the encounter as "practically nil."⁴³ Hence, according to Rodman, the Bismarck Sea operation was "a triumph of coordinated bomber assault against a determined and well-defended enemy convoy. With the incorporation of modified medium and light bombers designed specifically for low-altitude attack, other platforms could move back to higher altitudes. As a result, the Japanese convoy found it almost impossible to mount a proper defense, simply overwhelmed by the multiaxis, multialtitude bomber attacks."⁴⁴

The amassing of airpower against Japanese convoy Operation 81 also contributed significantly to Allied victory. Prior to the engagement, few Allied air attacks involved coordinated multisquadron action.⁴⁵ The Battle of the Bismarck Sea, however, involved 16 squadrons, and the various waves of attackers were



F/A-18E Super Hornet assigned to “Eagles” of strike fighter squadron 115 transits Bismarck Sea en route to Royal Australian Air Force Base Townsville, Queensland, Australia, during exercise Black Dagger, March 24, 2016 (U.S. Navy/Chris Pagenkopf)

coordinated to strike just moments apart, delivering a large pulse of firepower to the enemy.⁴⁶ In fact, much of the devastation the Japanese suffered took place on the morning of March 3—just 1 day of the entire battle.

Today, many believe that the U.S. military has lost the ability to overwhelm enemies. Part of that mindset is likely the lack of resistance encountered during operations carried out after 2001. Another reason is the collective U.S. obsession with fewer numbers of large, highly expensive—read much less expendable—platforms. How can you present massed, multidimensional/vectored threats to the enemy when you simply do not have enough numbers?

With the return of Great Power competition and the concomitant quest to reestablish maritime dominance,

joint force planners must dare to think differently. In this respect, the National Defense Strategy is right on the mark when it argues for “chang[ing] . . . the way we organize and employ forces” and “developing operational concepts to sharpen our competitive advantages and enhance our lethality.”⁴⁷ That being said, U.S. naval forces must plan for challenging the integrated, layered defenses of near-peer rivals, and this is far removed from handling the relatively weak systems of extremist groups and Third World nations. To this end, Washington should reconsider the U.S. way of war that emphasizes qualities such as agility and precision over overwhelming force à la the application of Allied airpower during the Battle of the Bismarck Sea.

The likes of China and Russia are emphasizing the latter attribute in their

quest to negate U.S. military superiority in wartime. For instance, the People’s Liberation Army (PLA) is believed to have drawn up plans involving forces attacking from multiple dimensions—land, surface, sub-surface, and air—and vectors to overwhelm U.S. maritime forces. This involves pitting high-density, cheaper, and more expendable assets against the U.S. Navy battle force, which largely has the opposite of these characteristics and the magazine capacities of which could be depleted rapidly during a high-intensity missile exchange. James Holmes and Toshi Yoshihara note that “PLA saturation attacks will involve the concerted use of cruise, ballistic, and hypersonic missiles; aerial attack from manned and unmanned warplanes, mines; torpedo attack; electronic warfare and cyber warfare.”⁴⁸ As an example, they postulate that

an aerial missile attack “would compel U.S. tacticians to look skyward while *Kilo*-class diesel boats loosed salvos of wake-homing torpedoes . . . against U.S. surface combatants from below.”⁴⁹ In fact, this scenario somehow mirrors what happened during the opening stages of the Battle of the Bismarck Sea, when medium-altitude bombing runs paved the way for the low-level devastating attacks discussed earlier in this article. Therefore, Washington would do well to take a cue from Beijing in its endeavor to obtain maritime superiority in the face of A2/AD and adopt even more actively a cross-domain approach to maritime operations. After all, such an approach would greatly facilitate breaking the “walls” of an A2/AD-centric peer competitor, such as its integrated air defense systems.

Fortunately, the United States has taken a few tentative steps in the right direction. For a start, U.S. ground forces, which have hitherto been left out of the counter-A2/AD calculus, are finally being factored in. This can be seen in the promulgation of concepts such as the Marines Corps expeditionary advanced base operations, where they would help the Navy establish sea control.⁵⁰ It also bears notice that the U.S. Army is forging into doctrine the multidomain operations (MDO) concept that will see the Service operating against near-peer enemies in nonpermissive environments across all domains—land, sea, air, space, and cyber.⁵¹ In a nod to this new concept, the Army fired an antiship missile at a sea target during the 2018 Rim of the Pacific exercise. Facing the possibility of attack from different dimensions, the adversary’s operational and tactical picture would undoubtedly become more complicated. The key then is for the U.S. military (and allies) to be able to integrate their actions to deliver the kind of effects airpower delivered in the Bismarck Sea engagement. The force integration shown during the battle exemplifies the cross-domain synergy called for by the Pentagon that is key in the modern contested operating environment, and this is a point that cannot be overemphasized.

Indeed, there was a glimpse of this in the April 2018 military action against

Syria, where U.S., British, and French air and naval forces attacked the Bashar al-Asad regime from the Mediterranean, Red Sea, and Persian Gulf. After the operation, Admiral Richardson stated that the U.S. Navy was studying the lessons learned to better prep itself for higher intensity conflict.⁵² One hopes the Service has noted that the three-pronged, three-dimensional (there was also a submarine involved) nature of the attack had contributed to the overwhelming of Syrian air defenses, much like Allied aircraft did during the Battle of the Bismarck Sea 76 years ago. All that being said, the Army and the Air Force have publicly committed to MDO, but the Navy has not.⁵³ This situation does not bode well for the U.S. military’s goal of achieving cross-domain synergy, as MDO cannot become an official joint concept of all the Services and it will not be encapsulated in the joint force’s budgeting, procurement, and doctrine.⁵⁴

Conclusion

Military entities can be prone to inertia, and the Armed Forces are no exception. In the face of extant and emerging A2/AD systems that could seriously undermine U.S. control of the seas, Pentagon leaders should step up their game in addressing this issue. To be sure, the U.S. sea services have taken some action in this respect, but perhaps more could be done. To this end, while it is always good to think of novel ideas, it is often instructive to look to history, especially some of its less famous episodes, for takeaways. Indeed, such lessons are of immense value and free for learning, provided they are considered.

Winston Churchill once stated, “The longer you can look back, the farther you can look forward.” The sage British statesman was spot on here as historical events that seem far removed from the contemporary era can still provide lessons pointing to the way ahead. To be sure, the relatively lesser known Battle of the Bismarck Sea took place 76 years ago, and much in the operational environment has changed since then. We should also bear in mind the limitations of drawing lessons from a single historical episode.

Nevertheless, the fundamental challenges presented by a Great Power competitor remain the same, and the battle offers ample food for thought for Pentagon leaders in terms of coming up with a viable operational concept (think JAM-GC and related concepts), not only as a warfighting implement but also to act as a deterrent during peacetime against A2/AD-centric near-peer rivals.

All in all, the three key takeaways of the Battle of the Bismarck Sea may seem trite at first glance, but a deeper look will arguably show their worth in the discourse to preserve the exalted U.S. status of *primus inter pares* in the maritime domain. Going forward, Admiral Richardson in *Version 2.0* has alluded to a large-scale exercise in 2020 that will seek to test the Distributed Maritime Operations concept, as well as deliver an “initial cross-domain solution.”⁵⁵ While not much is currently known about the exercise, the joint force would do well to incorporate, if possible, land-based bombers as well as the capabilities of all Services into this particular drill as per the first and third lessons, respectively. The U.S. sea services have arguably lost their high-end warfighting edge in the long calm lee of the end of the Cold War. With the military edge of the United States fast eroding in relation to its strategic competitors, the Nation must adapt to this new reality by taking more appropriate measures or risk coming to grief. JFQ

Notes

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² John M. Richardson, *A Design for Maintaining Maritime Superiority, Version 1.0* (Washington, DC: Office of the Chief of Naval Operations, January 2016), 3.

³ John M. Richardson, *A Design for Maintaining Maritime Superiority, Version 2.0*

(Washington, DC: Office of the Chief of Naval Operations, December 2018), 3.

⁴ Richardson, *A Design for Maintaining Superiority, Version 1.0*, 6.

⁵ Richardson, *A Design for Maintaining Superiority, Version 2.0*, 4.

⁶ Gregory P. Gilbert, *The Battle of the Bismarck Sea: March 1943* (Canberra: Air Power Development Centre, 2013), 1.

⁷ James R. Holmes, "Defend the First Island Chain," U.S. Naval Institute *Proceedings* 140, no. 4 (2014), available at <www.usni.org/magazines/proceedings/2014/april/defend-first-island-chain>.

⁸ Quoted in Gilbert, *The Battle of the Bismarck Sea*, 72.

⁹ Ibid., 73.

¹⁰ Ibid., 12.

¹¹ Gary Null, *Weapon of Denial: Air Power and the Battle for New Guinea* (Washington, DC: Air Force History and Museums Program, 2010), 30, available at <<https://media.defense.gov/2010/Oct/06/2001329753/-1/-1/0/AFD-101006-028.pdf>>.

¹² Quoted in Gilbert, *The Battle of the Bismarck Sea*, 74.

¹³ Null, *Weapon of Denial*, 30.

¹⁴ Gilbert, *The Battle of the Bismarck Sea*, 5.

¹⁵ Wayne P. Hughes, Jr., and Robert P. Girrier, *Fleet Tactics and Naval Operations*, 3rd ed. (Annapolis, MD: Naval Institute Press, 2018), 122.

¹⁶ Ibid.

¹⁷ *United States Strategic Bombing Survey, Summary Report (Pacific War)* (Washington, DC: U.S. Government Printing Office, July 1, 1946), 11, available at <www.anesi.com/ussbs01.htm>.

¹⁸ Ibid.

¹⁹ *Air Force Operations* (Montgomery, AL: Curtis E. LeMay Center for Doctrine Development and Education, 2014), available at <www.doctrine.af.mil/Portals/61/documents/Annex_3-04/3-04-D23-SEA-AF-Ops.pdf?ver=2017-09-19-154108-393>.

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²² See "Resultant Fury," *Global Security*, available at <www.globalsecurity.org/military/ops/resultant-fury.htm>.

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