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Can China and Russia Make U.S. Aircraft Carriers **Obsolete?**

Dave Majumdar

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One of the Navy's top officals back in August gave us the answer.

Richardson also said that the carrier would remain relevant into the foreseeable future. Richardson pointed out that USS Enterprise was on its first deployment during the Cuban Missile Crisis in 1962, but since that time, the ship remained relevant over the years as its systems and its air wing were switched out even as the international security order changed around it. Even on the day she was finally pulled from active duty in December 2012, Enterprise remained as relevant as a warship as the day she first put to sea on her first deployment. The same will be true of the Ford-class. "That's our vision," Richardson said. "They'll certainly be making a big contribution."

The United States Navy is absolutely confident in the ability of its aircraft carriers and carrier air wings to fly and fight within zones defended by so-called anti-access/area denial (A2/AD) weapons. Both Russia and China—and to a lesser extent Iran—have been developing layered anti-ship and anti-aircraft defenses that would make it more difficult for the U.S. Navy to operate closer to their shores.

In the view of the U.S. Navy leadership, A2/AD—as it is now called—has existed since the dawn of warfare when primitive man was fighting with rocks and spears. Overtime, A2/AD techniques have evolved as technology has improved with ever-greater range and lethality. Rocks and spears eventually gave way to bows and arrows, muskets and cannons. Thus, the advent of long-range anti-ship cruise and ballistic missiles is simply another technological evolution of A2/AD.

"This is the next play in that," Adm. John Richardson, chief of naval operations, told *The National Interest* on Aug. 25 during an interview in his office in the Pentagon. "This A2/AD, well, it's certainly a goal for some of our competitors, but achieving that goal is much different and much more complicated."

Indeed, as many U.S. Navy commanders including Richardson and Rear Adm. (Upper Half) DeWolfe Miller, the service's director of air warfare, have pointed out, anti-access bubbles defended by Chinese DF-21D or DF-26 anti-ship ballistic missile systems or Russian Bastion-P supersonic anti-ship missile systems are not impenetrable 'Iron Domes.' Nor do formidable Russian and Chinese air defense systems such as the S-400 or HQ-9 necessarily render the airspace they protect into no-go zones for the carrier air wing.

Asked directly if he was confident in the ability of the aircraft carrier and its air wing to fight inside an A2/AD zone protected by anti-ship cruise and ballistic missiles as well as advanced air defenses, Richardson was unequivocal in his answer. "Yes," Richardson said—but he would not say how exactly how due to the need for operational security. "It's really a suite of capabilities, but I actually think we're talking too much in the open about some of the things we're doing, so I want to be thoughtful about how we talk about things so we don't give any of our competitors an advantage."

Meanwhile, Miller—who spoke to The National Interest on Aug. 23—directly addressed one of the major criticisms of the current air wing—which is that naval aviation has lost much of its

reach since the retirement of the Grumman A-6 Intruder and its KA-6 tanker counterpart. "I don't think we've lost reach at all," Miller said. "I think the range or the reach of the carrier strike group is actually greater than it was back in the day. And if you look at the precision of how we strike compared to what I started with—A-7s and A-6s—we've become quite a bit more precise air wing as well."

Miller attributes the improved performance of the air wing to the development of new technologies such as improved targeting pods, new long-range stand-off weapons and the Naval Integrated Fire Control-Counter Air (NIFC-CA) battle network. Essentially, the NIFC-CA construct—the first iterations of which are already being fielded—allows any component of the strike group to act as a sensor or shooter for another component of the unit. Thus a Boeing EA-18G Growler airborne electronic attack aircraft could pass on targeting data concerning a threat to a Boeing F/A-18E/F Super Hornet—which could then launch a weapon to destroy the target.

USS *Theodore Roosevelt* (CVN-71) was the first carrier to deploy with the initial version of NIFC-CA, Miller said. Another carrier will deploy with the battle network onboard soon, but Miller is reluctant to describe NIFC-CA as a system. Indeed, NIFC-CA is not a program of record, but a new way of combining existing capabilities to provide an integrated common picture to everyone involved. That means over time additional platforms and sensors will be integrated into the construct, providing an ever-more comprehensive view of the battlespace.

However, while Miller and Richardson are content with the current capabilities of the air wing, the addition of the Lockheed Martin F-35C Joint Strike Fighter and the future MQ-25 Stingray unmanned aerial refueling tanker will greatly boost the striking power of the carrier. Indeed, Miller spoke glowingly about the F-35C, even though the service has traditionally been lukewarm toward the single-engine stealth fighter.

"The F-35 is a quantum leap in air superiority—survivable, supersonic, comes with fighter agility and unbelievable, revolutionary comprehensive sensor suite," Miller said. "That's going to provide fifth-gen capability and we're going to combine that with [Northrop Grumman] E-2D—improved battle management. It's also going to be joined with our Growlers—compared to the Prowler—with the Next Gen Jammer (NGJ)—and it'll be combined with fourth-gen capacity."

The sum total of the F-35C, E-2D, EA-18G with the NGJ and the F/A-18E/F should result in an improved air wing, Miller said. Compared to today's air wing, the carrier air wing of 2025 will have better battle management, electronic attack, long-range weapons and a penetrating strike capability resident in the F-35C. "When F-35 enters the air wing, I think it's going to be quite potent," Miller said. "What you'll have is a mix of fourth-gen and fifth-gen with the capabilities I just discussed."

Initially, the Navy will deploy one F-35C squadron per air wing, plus two Super Hornet squadrons and one F/A-18C Hornet unit. Eventually, the legacy F/A-18C squadron will drop-off and will likely be replaced by a third Super Hornet unit. Asked if the Navy would move to a two

F-35C squadron air wing, Miller said: "Possibly. I think the budget will have something to say about that. But we'll at least start off with one."

Miller said that the Navy has not quite figured out exactly how it will integrate the F-35 into the air wing so that it can fight as a coherent whole. Miller suggested that exactly how the various components of the air wing will work together will depend on the situation. However, Miller did suggest that the EA-18Gs would support the F-35Cs and vice-versa against high-end threats. "It is still yet to be determined as we continue to learn to integrate these capabilities into the air wing," Miller said. "I'm very confident in the capabilities of the F-35."

Another critical node of the future carrier air wing will be the MQ-25 Stingray. While the focus tends to be on the airframe, the MQ-25 program is much more than that, Miller said. The program will create the infrastructure onboard the carrier for unmanned aircraft operations at sea as well as developing the necessary command and control systems to operate those machines. Those are essential for future unmanned carrier-based aircraft operations.

The primary mission of the MQ-25 will be "mission tanking" to extend the range of the carrier air wing with a secondary intelligence, surveillance and reconnaissance (ISR) role. Miller said that just by virtue of replacing the Super Hornet in the tanking role, the MQ-25 would increase the striking power of the carrier by freeing up a half-dozen F/A-18E/Fs for their primary missions. "Just adding MQ-25 to our air wing increases the lethality of our existing air wing," Miller said. "Doing the persistent ISR increases the survivability of our carrier strike group because now I have something persistent giving me eyes around the carrier and its strike group—especially in contested water type scenarios."

Meanwhile, the carrier itself has evolved from the first nuclear-powered carrier USS *Enterprise* (CVN-65) and the USS *Nimitz* (CVN-68)—which is the first of ten CVN-68-class carriers that comprise the Navy's carrier fleet. The soon-to-be commissioned *Gerald R. Ford* (CVN-78) represents a leap in technology with a massive increase in onboard electrical power generation, new technologies for launching and recovering aircraft and capacity for growth. The *Ford*-class will keep the carrier relevant decades into the future.

Miller said that there have been threats to the carrier since the dawn of naval aviation. In many ways, the threat to the carrier was arguably much greater during the Cold War when the Soviet Union massed entire regiments of Tupolev Tu-22M3 Backfires and deployed massive cruise missile-armed Oscar-class SSGN submarines to hunt down and destroy the Navy's flattops. The service developed ways to defeat the Soviet threat—and the carrier will adapt to fight in the current environment .

"We could have had this interview twenty-years-ago and there would have been a threat," Miller said. "The nature of war and A2/AD is not new—that's my point. I don't want to downplay it, but our improvements in information warfare, electronic warfare, payloads, the weapons systems that we've previously talked about—plus our ability to train to those capabilities that we have—we will create sanctuaries, we'll fight in those sanctuaries and we're a maneuver force."

Richardson also said that the carrier would remain relevant into the foreseeable future. Richardson pointed out that USS *Enterprise* was on its first deployment during the Cuban Missile Crisis in 1962, but since that time, the ship remained relevant over the years as its systems and its air wing were switched out even as the international security order changed around it. Even on the day she was finally pulled from active duty in December 2012, *Enterprise* remained as relevant as a warship as the day she first put to sea on her first deployment. The same will be true of the *Ford*-class. "That's our vision," Richardson said. "They'll certainly be making a big contribution."