Passing the Baton

World War II's Asian Theater and the Coming of Age of the Aircraft Carrier

By Rotem Kowner

The East Asian return to aircraft carriers: Launched in 2013, the Japanese helicopter carrier *Izumo* is the largest warship built by an East Asian nation since World War II and capable potentially of operating STOVL aircrafts.
Source: *Wikimedia Commons* at http://tinyurl.com/kw539ra.

Nowadays, when aircraft carriers rush to potential conflict arenas, we rarely question the supreme importance of this type of warship to major naval powers. Likewise, few would dispute the place of the present-day carrier as one of the ultimate symbols of naval dominance and national power—American power in particular. This type of warship is such a vital element in postwar American naval hegemony in Asia. Moreover, the carrier fleet maintained by the United States Navy (USN) is not only the world's largest, but is also greater—in terms of aggregated tonnage and number of vessels—than all other nations' carrier fleets put together. This state of affairs existed as early as summer 1945, when World War II came to an end, but it was a new phenomenon at the time. Several years earlier, on the eve of the war, the USN was far from dominating carrier warfare, and the operational significance of the carrier itself was still in question.

As late as 1939, few observers could envision such a swift shift in naval warfare. After all, the aircraft carrier—unlike any other contemporary naval platform—had never been in combat. Eventually, however, World War II naval warfare provided unequivocal testimony for the importance of the carrier—especially compared to the battleship, the most powerful type of warship until then. This testimony was so straightforward that no battleship was ever launched after World War II ended. What is rarely mentioned explicitly, however, is that in the Asian theater of World War II, the carrier not only had a major impact on victory, but also reached maturity. Essentially, it was in this theater alone and within less than four years that it became a decisive element in the struggle for naval dominance and a worthy heir to the battleship. Here, but not elsewhere, the carrier's role was crucial. So crucial, actually, that had no war started between Japan and the United States, one wonders whether this naval shift would have occurred at all.

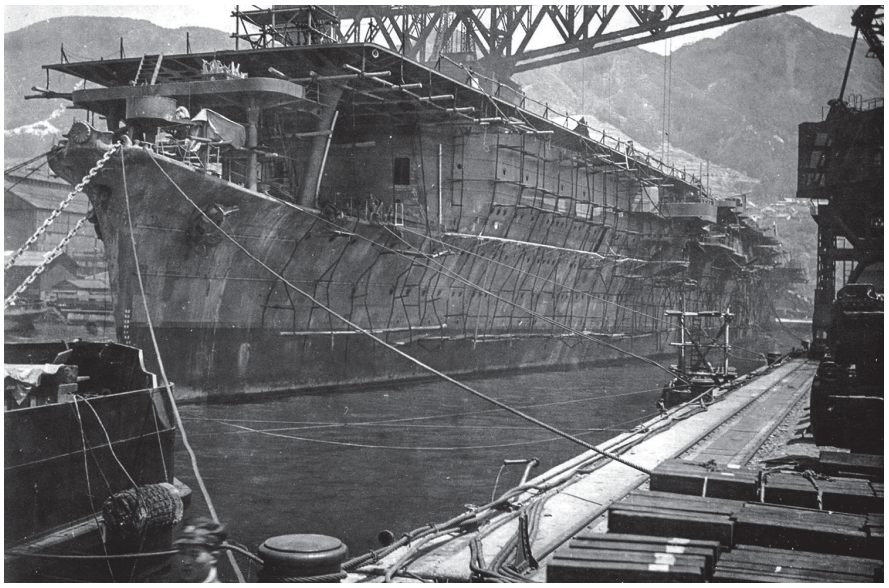
What was it about the Asian theater that brought the carrier to prominence? Why was it so suitable for incubating the development of the carrier? This article examines the role played by the Asian theater and the Japanese-American rivalry in the carrier's coming of age, as well as the reasons for its preeminence. In the essay, I contend that the fact that this dramatic shift occurred primarily in the Asian rather than in the European theater or elsewhere is not a mere geographical anecdote. It was the outcome of a process that began with the birth of this weapon system and was prompted, if not shaped, by the geographical features of the Asian theater.

Carriers in the Asian Theater: Witnessing the Rite of Passage

The saga of aircraft carriers in the Asian theater took a unique course before World War II. A conspicuous token of this uniqueness was the Imperial Japanese Navy (IJN), which in April 1941—seven months before the outbreak of the war—formed a *kidō butai*, a separate striking force of carriers, the only one of its kind. Soon, this force was to shock the world, but the rise of Japan to the rank of a naval superpower and an innovative world leader in the operation of naval airpower did not occur instantly. As an island nation increasingly dependent on external supplies and possessing growing colonial ambitions on the Asian mainland, a strong navy was expected to mitigate Japan's geo-strategical vulnerabilities and facilitate its aspirations. Established in the early 1870s, the IJN expanded rapidly as Japan prepared to face its continental foes: Qing China in 1894, followed by tsarist Russia a decade later. The continental conflicts with China and Russia demonstrated that dominance in the seas was vital to any Japanese decisive land victory.

By the end of the Russo-Japanese War in 1905, the IJN was already the world's fifth-largest navy, but it now faced a bigger hurdle: the United States' larger and fast-expanding naval force. In just two years after the war's end, both the IJN and the USN began to regard each other as their primary potential enemy and prepared for a future clash. Depending as it did on a far smaller economy than any other contemporary naval power, Japan compensated with quality and innovation. Airplanes, which first flew in 1903, were one promising venue of innovation, and Japanese naval officers began to envision their potential as early as 1909. The adoption of this new technology was rapid; as World War I broke out, Japan possessed a number of imported seaplanes and the converted carrier *Wakamiya*. On September 5, 1914, this ship and its airplanes carried out the first-ever aerial assault from the sea, attacking the German naval base in Qingdao, China. Shortly after WWI ended, the IJN was the first navy to commission a warship that was designed and built as an aircraft carrier: the IJN *Hōshō*.

The Pacific Ocean, and the Asian theater as a whole, was particularly suitable for the operation of carriers. Although few could predict they would become such an effective weapon system little more than two decades later, by the end of World War I, it was evident that the use of carriers in this theater could provide their users with particular advantages. Japan was a major beneficiary of this development. Controlling a long island chain in the vicinity of the East Asian coast stretching from the Kuril Islands to Taiwan, as well as the recently obtained ex-German colonies in Micronesia (South Sea Mandate), Japan looked for a practical and economic way to defend this vast maritime empire. Carriers offered mobile airfields that could not only defend these vast and often-underdeveloped areas, but also support land operations on the continent. Having substantial interests in the region but lacking air bases in Northeast Asia, the United States and Britain also viewed the carrier as a means for maintaining their aerial dominance. Among the two, it was primarily the USN that envisaged the need for carrier-based close air support once its forces moved westward across the Pacific, and far from land-based airplanes, in order to face the IJN.



Japanese aircraft carrier *Sōryū* fitting out at Kure Naval Arsenal, early 1937. Source: http://tinyurl.com/owfxus9.

Japan moved ahead early to capitalize on the advantages the carrier could provide, and its industry by the 1920s began to catch up with Western powers in terms of aviation technology. The Washington Naval Conference of 1921–22 and the subsequent conference in London in 1930 pushed Japan into relying increasingly on carriers and airpower by limiting its conventional surface warship force substantially. In subsequent years, China provided the arena in which IJN pilots improved their combat skills and tactics, first during the limited clash over Shanghai in 1932 and then during the full-scale Sino-Japanese War that began in 1937. Eight months before the outbreak of this massive conflict, Japan withdrew from the naval treaty system, removing any remaining limitations on the construction of

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Japanese A6M2 Zero fighters prepare to launch from the Imperial Japanese Navy aicraft carrier *Akagi* for the second wave of attacks on Pearl Harbor, Hawai`i. Source: http://tinyurl.com/outmplj.

US Navy *Douglas TBD-1* Devastators of Torpedo Squadron 6 (VT-6) planes unfolding their wings on the deck of USS *Enterprise* (CV-6) prior to launching for attack against four Japanese carriers on the first day of the Battle of Midway. Source: http://tinyurl.com/lo7mbqr.

Perfecting techniques of deck operation: A stern view of IJN carrier *Akagi* loaded with airplanes, 1934. Source: *Wikimedia Commons* at http://tinyurl.com/pbnvex2.

carriers. During the next five years, until its attack on Pearl Harbor, the IJN completed the construction of an additional three carriers, two of which were superior to any existing American carriers. This critical addition was enhanced by a rapid growth in aircraft production and by the introduction of several outstanding carrier-based airplanes, most notably the Mitsubishi A6M (Type 0, "Zero") carrier fighter in 1940.

Although Japan was strategically defensive against the United States, it also maintained a tradition of being tactically aggressive. By focusing on the offensive and neglecting certain defensive domains (e.g., anti-submarine warfare), the IJN could match quality with quantity. On the eve of the Pacific war, Japan had nine operational carriers with 474 aircraft on board—by then the world's largest force of carriers and carrier-based airplanes. These planes were highly efficient, and their pilots were in all likelihood the best in the world. With such a capable carrier force at hand, it is hardly surprising that Admiral Yamamoto Isoroku, the commander-in-chief of the combined fleet and a former chief of the Naval Aviation Department, decided to rely on it in the opening gambit of the war. He was to use six carriers and more than 350 carrier-based aircraft as the primary weapon in a preventive attack against Pearl Harbor, the largest USN base in the Pacific. The attack was successful beyond Yamamoto's expectations. His force sank four battleships, damaged four others, and destroyed 188 airplanes—all at the price of twenty-nine planes. The attack temporarily disabled the USN Pacific Fleet and left the Americans unable to prevent the IJN from launching the Japanese invasion into Southeast Asia. This initial success immediately altered the destiny of the carrier. More than seventy years later, Pearl Harbor remains the most spectacular naval surprise attack ever.

Alongside the sinking of two British capital ships off Singapore by land-based aircrafts three days later, the Japanese strike at Pearl Harbor unequivocally demonstrated the effectiveness of airpower in naval warfare. The Japanese carriers' advantage over US battleships at sea and even more so against other highly organized and experienced carrier forces remained, however, questionable. To answer this, IJN carriers had to confront USN warships in

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the Pacific. Paradoxically, the damage inflicted upon eight of the nine American battleships in the Pacific forced the USN to rely on its three carriers in the theater, each of which invariably managed to escape Japanese raids. Within six months, both naval forces were able to provide more than a clue to the full potential of this type of warship. In early May 1942, at the Battle of the Coral Sea, two carrier forces—the IJN's with three and the USN's with two—engaged each other for the first time in history. With a carrier sunk on each side, the outcomes of the battle were inconclusive, but this battle is also noted for the fact that the two belligerents did not see each other from aboard throughout the entire engagement.[1] One month later, however, another carrier clash ended in a completely different manner.

At the Battle of Midway in June 1942, the USN succeeded in turning the tables and sank four Japanese carriers at the loss of only one of their own.[2] Contrary to received wisdom, the Battle of Midway was far from a turning point in the war or even a "decisive" battle. But for the aircraft carrier, it was a turning point, as it enthroned the carrier as the most important surface warship and in essence the primary warship in the Pacific. Hereafter, as military historian Norman Polmar has observed, "All other warships would serve primarily in a supporting role—*if carriers were available*."[3] No wonder, then, that after Midway both the United States and Japan—and to some extent even Great Britain—accelerated the construction of new carriers alongside the launch of large programs to convert various ships, including the hulls of cruisers and battleships under construction, into carriers. The Americans' greater capacity for mass shipbuilding made a difference relatively early in the war. By 1943, the USN already had a clear advantage. With close to 17,000 aircraft at its disposal, compared with the IJN's nearly 3,000, the USN dramatically gained the upper hand Japan had enjoyed at the beginning of the war.

Japan lagged behind but also kept constructing and converting new carriers. Eventually, in the June 1944 Battle of the Philippine Sea, the site of the greatest clash of carriers in history, both sides used a huge number of ships and aircraft. While the IJN employed ten carriers and about 450 aircraft, the USN used no less than fifteen carriers and about 900 aircraft. Quality mattered too. While in December 1941 a Japanese naval pilot had typically earned at least 700 flight hours compared to some 305 hours required of American pilots, the flight hours for Japanese and American pilots were each about 500 hours in 1943. By the end of the war, IJN pilots on average were earning only ninety flight hours, compared to an average of 525 hours for their American foes. In retrospect, the prewar emphasis on carriers and their rapid construction thereafter proved to be right. In the final three years of the war, carrier task forces were at least as powerful against large surface ships**,** including battleships, as they were against land bases. In addition, carriers were intensively used against coastal targets to support landing units. Moreover, in the vast stretches of the western Pacific Ocean, where targets were often far beyond the reach of land-based aircraft, carrier-based planes were the only means for air support and for reaching inland targets.

Aircraft Carriers in the European Theater

The European theater differed from the Asian one not only in its geographical features, but simply for the fact that only the British Royal Navy (RN) used carriers. My contention is that the unilateral use of a weapon system

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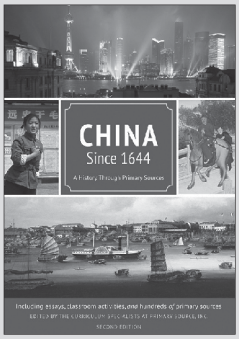

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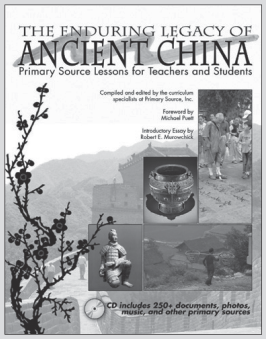

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American carrier aircraft were responsible for more Japanese warship tonnage sunk than any other agent. They were responsible for no less than 70 percent of Japanese fleet carrier sinkings and 55 percent of battleship sinkings.

is unlikely to push its development rapidly, let alone bring it into maturity, which in practice means that it cannot replace a currently successful weapon system. In other words, it takes two to tango, and only in the Asian theater did two or more navies operate carriers: the IJN, USN, and to a lesser extent the RN. Their concurrent presence in the Pacific incentivized each navy to improve. The fact that neither the German Kriegsmarine (GKM) nor the Italian Regia Marina (IRM) utilized carriers rendered the carrier largely peripheral in military action in the Atlantic and Mediterranean.

The absence of carriers in the German and Italian navies is central to the argument concerning the carrier's peripheral role in the Atlantic. Facing no rival aircraft carriers, the RN was not required to constantly modify its carriers to develop tactics for engaging others' carriers or to rethink their role and usage. Obviously, it was not a mere coincidence that the GKM and the IRM had never commissioned a carrier. The German and Italian reluctance stemmed from both strategic considerations and political constraints, dating back to the turn of the century. Another reason was the insistence of air force commanders in both countries to control all military aviation. Still, such demands for total control also took place among other naval powers. The difference, I believe, is found in the positions of German and Italian naval forces in the interwar period and, no less importantly, in the strategic vision and naval objectives of each country.

Above all, it is evident that both Germany and Italy missed the crucial stage of carrier construction. When they realized the importance of this vessel to their war efforts, it was already too late. After all, carrier warfare is more than the construction of suitable vessels and even the training of pilots in taking off and landing at sea. Britain too lagged behind in developing its naval airpower in comparison with Japan and the United States. Despite being an early leader in carrier development, it increasingly allocated a smaller proportion of its air effort to the navy. Instead, it strengthened its independent air force, a branch possessed by neither Japan nor the United States. Geographical and consequently strategic reasons played an undeniable role in this respect, since Britain was the only one among the three that anticipated aerial attacks from its nearby neighbors.

With carriers in service only on the British side, naval warfare in the European theater, mostly in the northern Atlantic Ocean and the Mediterranean Sea, had a completely different character than that in the Asian theater. And yet the RN's use of aircraft carriers provides some food for thought on the course of development this weapon system might have had if the war in the Pacific had not erupted. In fact, apart from a single assault by one carrier against the Italian battle fleet at anchor in the harbor of Taranto in November 1940, British carriers were primarily used for support and escort missions that rendered them secondary. The limited place of carriers is especially evident in the war against Germany. This is because Britain and, after December 1941, the US were largely fighting submarines; and in this kind of warfare, the carrier initially had little to do. Although British carriers played an important role in the Atlantic and Mediterranean arenas, they were far from decisive or revolutionary. Furthermore, in most of their actions, carrier-based British flyers' combat performance was mediocre and their efficiency limited.

Conclusion and Consequences: Why the Carrier Took Off in the Asian Theater

In modern times, warships tend to evolve most dramatically during or after protracted conflicts and combat actions. In this light, the almost six-year war in the European theater and the almost four-year war in the Asian theater were more than sufficient to allow the ascent of the carrier. But the contribution of the two theaters was far from equal. Differences in geography in the two arenas significantly affected military objectives and strategies for all combatants. The two major rivals in the Pacific early on realized that, in Asia, geography made the carrier a potentially important weapon; both chose to build carriers during much of the two decades that had preceded World War II.

Wartime Japan and the United States placed high priority on the offensive. Although Japan, like Britain, is an island country in need of raw materials and food supplies, its general strategy was based on aggressive expansion far from home and a tactical offensive against the USN within its defense perimeter. The United States concentrated on the offensive even more in attempting to halt and reverse the Japanese expansion. Far from its naval bases and airfields, carriers offered an ideal solution for long-range power projection and endurance. The carriers' coming of age was not divorced from financial considerations. Always expensive vessels, their proliferation during the final years of the war took place, at least in the United States, in a period of financial capacity and a spending avalanche. Although this development began with the US Two-Ocean Navy Act of July 1940, it was a rare wartime alliance between pro-Navy President Franklin Roosevelt; a supportive Congress; and an overly ambitious commander-in-chief of the navy, Fleet Admiral Ernest King, that brought about the construction of the largest armada the world has ever seen, most of which was deployed in the Pacific. The figures are still staggering. Two years into the war, the United States was in the midst of a construction frenzy that resulted in an astounding number of vessels—no less than twenty-eight huge fleet carriers and seventy-two smaller escort carriers.

Successful naval weapon systems require quite a long period of incubation. In this arena, it was the IJN that unquestionably precipitated much of the carrier development and was the first navy to make a genuinely concerted and aggressive use of a carrier striking force in the Pacific. In hindsight, nonetheless, the successful operation of carriers by the USN appears to have made the stronger impact on postwar developments. Taking up the Japanese gauntlet and deploying carriers in unprecedented numbers as the war advanced, the USN was a worthy heir to the IJN. The relative significance of its carriers in the Pacific undoubtedly justifies the credit they were later given. American carrier aircraft were responsible for more Japanese warship tonnage sunk than any other agent. They were responsible for no less than 70 percent of Japanese fleet carrier sinkings and 55 percent of battleship sinkings. Numbers aside, the American legacy was also due to the larger number of carriers operated by the USN, the ultimately superior tactics it developed, and—critically—the fact that the United States and its allies won the war.

After the war, it was only the USN that kept utilizing carriers in significant numbers in repeated crises and regional wars, many of them in the Pacific shores of East Asia. However, this passing of the baton from British and Japanese to American hands might disguise a basic fact. The revolution was not in the type of warship but in the use of the airplane as a new and decisive naval weapon system that heralded the decline of surface ships altogether. There is another peculiar point about this story. After centuries in which the Atlantic Ocean and the seas in its vicinities served as the backdrop for the emergence of naval innovation, it was now the Pacific Ocean's turn. It was a harbinger, albeit a rather early one, for the rise of the Pacific Rim and the reemergence of East Asia into world prominence. It is not surprising, then, that in recent years, no less than five Asian navies—India, China, Japan, South Korea, and Thailand—have

obtained or are in the midst of constructing full-scale attack aircraft carriers or smaller helicopter carriers. They invariably seem to believe carriers offer considerable strategical benefits in the arena, not to mention national prestige. Regretfully, the proliferation of this weapon system increases the likelihood it could again take an active part in future conflicts in the region. ■

NOTES

1. For the Battle of the Coral Sea, see Paul S. Dull, *A Battle History of the Imperial Japanese Navy (1941–1945)* (Annapolis: Naval Institute Press, 1978), 115–131; Samuel Eliot Morison, *History of the United States Naval Operations in World War II: Coral Sea, Midway and Submarine Actions, May 1942–August 1942*, vol. 4 (Boston: Little, Brown, 1949); and John B. Lundstrom, *The First Team: Pacific Naval Air Combat from Pearl Harbor to Midway* (Annapolis: Naval Institute Press, 1984), 155–305.
2. There is vast literature on the Battle of Midway. See the classical account of the battle by Mitsuo Fuchida and Masatake Okumiya, *Midway: The Battle that Doomed Japan* (Annapolis: Naval Institute, 1955); Gordon Prange, *Miracle at Midway* (New York: McGraw-Hill, 1982); Morison, *History of the United States Naval Operations,* Vol. 4; Lundstrom, *The First Team*, 307–447; Dull, *A Battle History*, 133–171; Bōeichō Bōei Kenshūjo Senshishitsu, *Senshi sōsho* (Tokyo: Asagumo Shinbunsha, 1966–81); *Middowē kaisen,* vol. 38; and the recent important contribution of Jonathan Parshall and Anthony Tully, *Shattered Sword: The Untold Story of the Battle of Midway* (Washington: Potomac Books, 2005).
3. Norman Polmar, *Aircraft Carriers: A History of Carrier Aviation and Its Influence on World Events,* vol. 1 (Washington: Potomac Books, 2006–2008), 259.

RECOMMENDED READING ON CARRIER DEVELOPMENT AND WARFARE IN THE ASIAN THEATER

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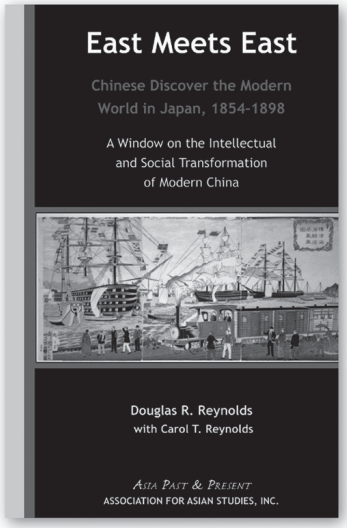

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