Naval War College Review

Volume 44
Number 2 *Spring*

Article 6

1991

Japanese Naval Preparations for World War II

Yoichi Hirama
JMSDF (Ret.)

Japanese Naval Preparations for World War II

Rear Admiral Yôichi Hirama, JMSDF (Retired)

In general, the strategic outlook of the Imperial Japanese Navy was from its beginning decisively shaped by limits on its armament. The navy went to war against the Peiyang Fleet of the Ch'ing Dynasty in 1894-95 with well-gunned but lightly armored ships, being unable to afford the heavy vessels that German yards provided to the Chinese. It opposed the Russians in 1904-05 with the best battleships Britain could supply but, because of Japanese financial and industrial weakness, fewer than the Russians had. The naval arms limitation treaties of the interwar era created a situation for Japanese naval planners that was different from the past only in that limitations came from the outside, in the form of international agreements.

The Washington Treaty put a ceiling on the size and number of capital ships starting in the early 1920s, and the London Treaty further curtailed strength in other types of ships from 1930 onward. The result was that, even in the period of naval rearmament during the 1930s, Japanese naval strategy continued to reflect a strong conviction of material inferiority. While becoming one of the most powerful navies on earth, the Japanese navy still thought of itself as an underdog.

The development of this psychology in relation to the United States Navy goes back to the period following the Russo-Japanese War, when America first began to emerge as a threat in Japanese thinking. The navy began to manage naval education and training, fleet formations, and armaments all with an American enemy—an overwhelmingly powerful one—in mind. At that time it was said that the navy was "sufficient to defend but insufficient to attack." At about the time of World War I, the navy formulated a strategy of "interception-attrition operations" (*yûgeki zengen sakusen*) to deal with American preponderance. After the Washington Treaty, this strategy was written into official statements of doctrine. And, following the signing of the London Treaty, it was given renewed emphasis by its incorporation into the operations plans of new weapons that were not subject to limitation. Even

Admiral Hirama is a professor of maritime defense science at the National Defense Academy, Yokosuka, Japan.

after Japan had renounced the treaties and begun a program of rapid naval expansion, it remained the basis of Japan's naval thinking because the navy's perception of its own weakness continued as before.

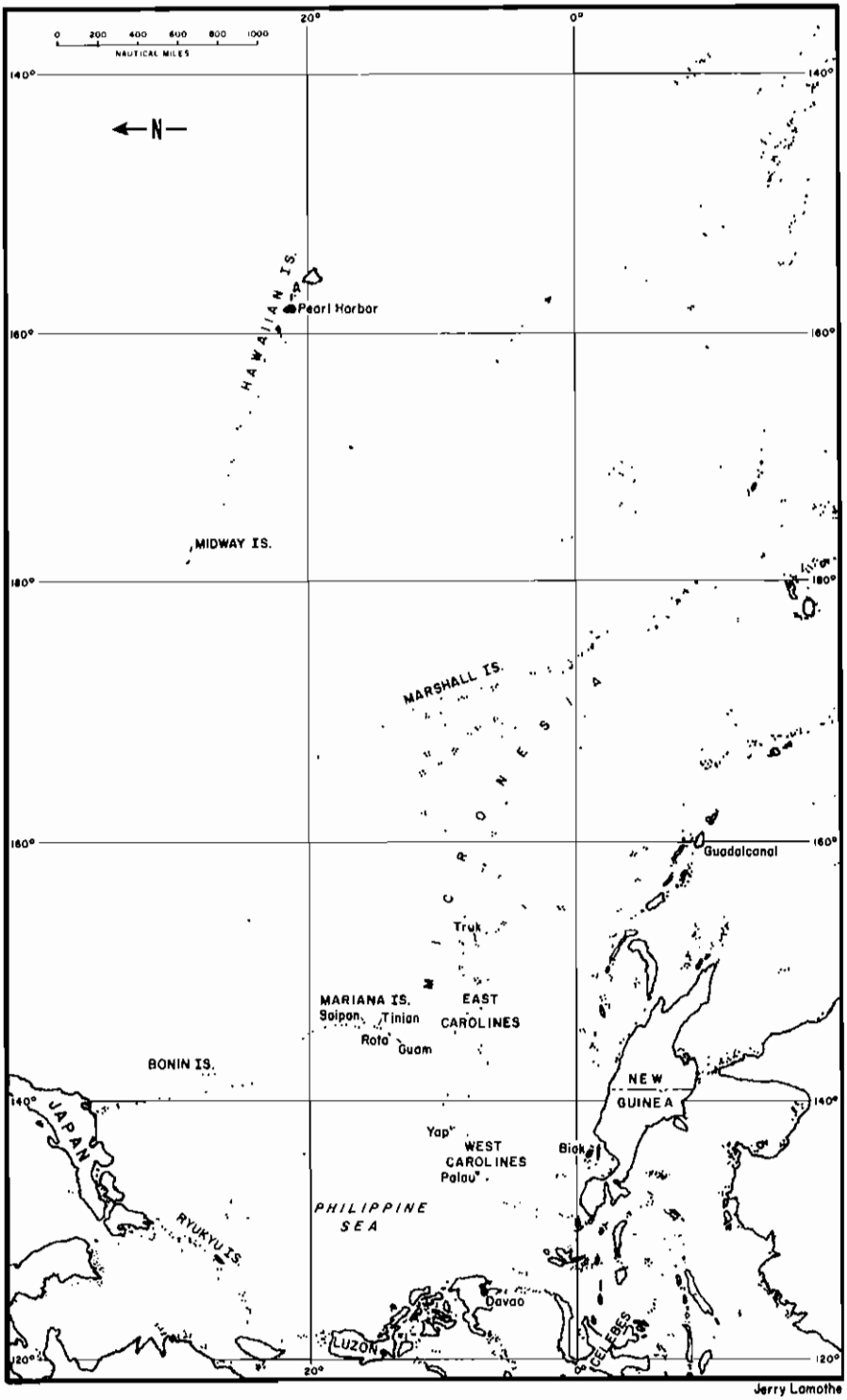
This strategy, which had in fact become dogma by the late 1930s, entailed the following operations:

- First, at the start of hostilities the navy would destroy the U.S. Asiatic Fleet and, in cooperation with the army, seize Luzon in the Philippines and Guam. These actions would eliminate American strongholds in the Western Pacific.
- Second, submarines would proceed to the Eastern Pacific, where they would monitor the movements of the main American fleet. They would track the American force as it set out westward and attack it repeatedly to diminish its strength.
- Third, naval aircraft based in the South Seas Mandated Islands (hereafter "Micronesia") would attack the enemy once he came within range. Carrier-borne aircraft would further reduce his strength.
- Fourth, an advance body of cruisers and destroyers supported by fast battleships would deal a major blow to the American fleet in a night attack. This would occur once the enemy had reached the seas designated for the decisive battle and would constitute the first phase of this battle. The second and final phase would follow at daybreak, when the full weight of the main battle fleet would be thrown against the American fleet and annihilate it.[1]

This article will consider the evolution of the strategy and weapon systems of the Japanese navy in the 1930s. Strategy is particularly important for our discussion, because Japanese naval strategy, which attempted to define how a weaker force might best a stronger, determined to an extraordinary degree what kind of weapons were developed before the war. The article will conclude with an example from the war itself illustrating the legacy of this period in both strategy and weapons.

The Development of Weapon Systems in Light of Strategy

Surface Combatants. The Japanese navy began to officially regard the U.S. Navy as its potential enemy with the establishment of the Imperial Defense Policy of 1907.[2] At that time the United States was mainly a "budgetary enemy," that is, a useful reference for making proposals for naval building, but nevertheless, this marked a significant transition in strategic thinking. The next year, when the Great White Fleet (consisting of the flagship *Connecticut* and fifteen other battleships) made a demonstration visit to Yokohama, the navy held its first exercises based on the assumption of an American enemy.[3] In that era, because aircraft and submarines were crude and could not be counted on as auxiliary forces on the high seas, and because destroyers were small and lacked seaworthiness, the navy planned to employ its battleships


0 200 400 600 800 1000
NAUTICAL MILES
N
20°
0°
140°
160°
180°
HAWAIIAN IS.
Pearl Harbor
MIDWAY IS.
MARSHALL IS.
MICRONESIA
Guadalcanal
Truk
MARIANA IS.
Saipan
Tinian
Rota
Guam
EAST CAROLINES
BONIN IS.
JAPAN
NEW GUINEA
Yap
WEST CAROLINES
Palau
Biak
PHILIPPINE SEA
RYUKYU IS.
Davao
LUZON
CELEBES
120°
Jerry Lamothe

and cruisers to conduct a decisive battle. It was to take place in waters west of the Bonin Islands. There the Japanese main forces would intercept the American fleet, which would be fatigued from its long voyage from the west coast of the United States.

World War I increased the naval antagonism between Japan and the United States at the same time that, temporarily at least, it reinforced Japan's reliance on capital ships. Japan acquired the former German islands in Micronesia during the war. They lay athwart American lines of communication to Guam and the Philippines and had great strategic value as naval bases. In the eyes of Japanese naval leaders, Jutland and other actions, such as the Falkland Islands battle, reconfirmed their traditional reliance on capital ships as the key to victory at sea. The Sino and Russo-Japanese Wars had both been won by such ships in main force actions, and they seemed to be the key to naval power in the immediate post-World War I period as well.

Such views launched the navy on a campaign to build a powerful battle fleet. In the Imperial Diet and in public forums the navy called for an "eight-eight fleet," that is, a fleet with a main force of eight battleships and eight battle cruisers. It got bills passed for an "eight-four fleet" in 1917 and an "eight-six fleet" in 1918, and finally the Diet voted for an "eight-eight fleet" in 1920.[4] This ideal battle fleet envisaged by the navy came to naught, however, when Japan signed the Washington Treaty in 1922. The navy found itself in a position of forced inferiority, allowed to maintain no more than 60 percent of the capital ship and carrier strength of Britain and the United States (the so-called 5:5:3 ratio).

At this point the navy began a momentous switch from an interception strategy based on capital ships to an interception-attrition plan based on light craft. Numerically, cruisers, destroyers, and submarines were free of the Washington limitations, and therefore Japanese strategists made every effort to devise new tactics for these weapons and improve their performance in accordance with these tactics. As it turned out, submarines were still not sufficiently advanced for long-range deployment, but cruisers and destroyers could be sent to meet the enemy. Naval staff officers saw a new role for light cruisers with their 6-inch guns and destroyers with their potent torpedo armament: starting in 1924, they organized such vessels into special torpedo squadrons for night attack. In this period night operations were very difficult, but the navy believed such operations could be made feasible by intensive training. The navy might be consigned to a permanent position of inferiority under the treaty, but its leaders felt that it might well exceed the United States in the seriousness of its commitment to its task. Even before this period the navy upheld the tradition of the seven-day workweek—one navy slogan was "*getsu, getsu, ka, sui, moku, kin, kin,*" meaning that the navy week was "Monday, Monday, Tuesday, Wednesday, Thursday, Friday, Friday"—and

in the 1920s and 1930s it conducted maneuvers which were arduous in the extreme, causing the loss of men and ships.[5]

Around 1927 high priority was assigned to night fighting as the principal means of attrition operations to precede the decisive battle. In the organization of the Combined Fleet for 1929, the command and responsibility for night raids was assigned to a night battle force under the commander of a heavy cruiser squadron. This commander also became head of the advance guard forces.

During the era of the naval arms agreements the Japanese navy, like the navies of the other great powers, strove to improve the capabilities of the ships covered by the treaties and to build up its force of light vessels outside the treaties. While it went about rebuilding its battleships, the navy worked assiduously to produce new designs of cruisers and destroyers. The new vessels in these classes built during the 1920s and 1930s were probably the most advanced in the world. In the class of light cruisers, the 2,890-ton *Yûbari*, commissioned in 1923, was equal in performance to most 5,000-ton cruisers. The 8,000-ton *Furutaka* was completed in 1926; with its six 8-inch guns and 12 torpedo tubes, it was comparable in strength to 10,000-ton cruisers.[6] In 1928 came the *Myôkô*-class heavy cruisers of 10,980 tons, equipped with ten 8-inch guns and 12 torpedo tubes. The *Takao*-class heavy cruisers (11,350 tons) appeared in 1932. The *Mogami* class, which came to the fore in 1935, had fifteen 6-inch guns and 12 torpedo tubes, and its standard displacement was 11,200 tons.[7]

Meanwhile, the navy worked hard to improve the combat capability of its destroyers. In 1928 it built the *Fubuki*, a long-range destroyer of 1,680 tons. It was a revolutionary vessel, the first of the modern destroyers, equipped with 3 triple 24-inch torpedo tube mounts and six 5-inch guns in enclosed twin mounts. Further improvements to destroyers came in the 1930s.

Since the principal weapon delivered by these light craft in attrition operations was to be the torpedo, special pains were taken to improve it, and with dramatic results. In 1935 the navy succeeded in developing an oxygen torpedo, the Type 93, with a range of 40,000 meters at 36 knots. It far outclassed the torpedoes of the other naval powers at that time. Its adoption into the fleet in the late 1930s led to notable changes in torpedo tactics to take advantage of its range and stealth (it was virtually wakeless). Its immediate impact on ship types is illustrated by the plans drawn up in 1937 to modify the three light cruisers *Kitakami*, *Ôi*, and *Kiso*. They were to be rebuilt as "torpedo cruisers" (*Jûrai sôkan*), each with 40 torpedo tubes, according to the annual naval defense plan of that year.[8]

Submarines. As undersea weapons technology steadily advanced in the 1920s and 1930s, the submarine became more and more important in the operations of the Japanese navy. Staff planners assigned submarines critical duties in

connection with the interception-attrition strategy as their seagoing qualities improved, making them responsible for reconnoitering the enemy fleet at anchor, pursuing it when underway, and attacking it to whittle down its strength in preparation for the decisive battle of heavy fleet units.

Based on such operational concepts and with the U.S. Navy in mind, the navy endeavored to develop large submarines with sufficient range to cross the Pacific and return without refueling and also with enough speed to shadow the U.S. fleet. In 1924 the navy commissioned the *I-51*. Classed as a "cruising submarine," it was the first design based on purely Japanese ideas. With a size of 1,400 tons, it could make 20 knots on the surface and 10 knots submerged, and it had 9 torpedo tubes. The navy pursued other ambitious projects in submarine warfare, the most striking of which was the construction in the early 1930s of submarines which carried aircraft for improved reconnaissance capabilities. The *I-5* of 1932 was the first such vessel in Japan, and forty-three others followed.[9] Japan's was the only navy to use such submarines operationally in a big way.

At the time of the London Conference, Japanese naval planning envisaged a large role for submarines. Specifically, in case of war with the United States, the navy planned to dispatch about 6 cruising submarines to the area of the Hawaiian Islands for monitoring and pursuit. Once the enemy's main force set out, a total of about 36 submarines would proceed to areas in Micronesia where the American fleet was expected, there to prepare for the decisive battle. Consequently, at the London Conference Japan argued for 78,000 tons of submarines, but had to settle for less. With only 85 submarines presumed to be available for operations, plans for their disposition were worked out in 1931 as follows:

- Off the west coast of the United States—4 minelaying submarines
- Off Hawaii—9 cruising submarines for monitoring
- East side of Micronesia—9 large submarines
- Marianas area—9 medium submarines
- Southern Islands area—9 medium submarines
- Southeast area—9 medium submarines
- Philippine area—9 large submarines
- For pursuing and attacking the U.S. fleet—27 large submarines.[10]

In accordance with these operational ideas, the navy built a "command cruiser" submarine in 1937. It was the *I-7*, a 2,200-ton boat with flag space and a top speed of 23 knots on the surface. An improved model, the *I-9*, came out in 1941 under the Third Replenishment Plan. It displaced 2,400 tons and boasted a surface speed of 23.5 knots with a range of 16,000 miles at 16 knots.[11]

In 1933 the navy began work on the midget submarine, which for purposes of secrecy was called the "A" Target (*kô hyôteki*). Tacticians believed that this weapon, if properly developed, would give the inferior Japanese fleet an edge in the decisive battle. In 1938 three submarine tenders for the

midgets—the *Chiyoda, Nisshin*, and *Chitose* (all about 11,000 tons)—were completed. The navy planned to use these vessels as seaplane tenders in peacetime, but in war each would carry 12 midget submarines. They would move into the path of the enemy fleet just before the decisive battle and launch the midgets from astern at intervals of 1,000 meters while steaming at 20 knots.[12]

Finally, under the Fifth Replenishment Plan of 1940, the navy built the *Ôyodo*, a submarine command cruiser which carried 6 seaplanes and was designed to command submarines engaged in interception operations.

The Naval Air Corps. Japanese naval strategists were dismayed by the reductions in strength required under the London Treaty. Japan could maintain only 70 percent of U.S. strength in auxiliary vessels and was held to 60 percent in heavy cruisers and 52,000 tons in submarines. These restrictions made night attacks and indeed the whole scheme of interception-attrition operations doubtful of success. The navy therefore turned to aircraft.

Contrary to popular perception, the naval air arm had not always been favored in Japan. Though its early advocates were earnest and strident, naval air power was retarded by several factors. The Japanese economy had slumped seriously after World War I. There was a mood of pacificism in Japan arising from such developments as the founding of the League of Nations and Japan's signing of the Washington Treaties. The result was that increments to the naval air arm were repeatedly postponed, and its forces fell far behind those of Europe and the United States. At the end of 1931, for purposes of operations the entire naval air force could count a mere 7½ air groups and 120 aircraft.[13] It was only at that juncture, with the limitations of the London Treaty coming into force, that the navy turned to air power. The Supreme War Council requested 16 air groups to make up for reductions of surface forces under the treaty, and another 16 to match the expansion of U.S. naval air power.[14] It received 14 under the First Replenishment Plan of 1931 and 8 under the Second of 1934.[15]

Carrier development, as opposed to the buildup of aircraft strength, had begun early in the Japanese navy. The 7,500-ton *Hôsho*, laid down in December 1919 in the naval dockyard at Yokosuka, was the second warship, after the British *Hermes*, to be designed from the keel up as a carrier. The 30,000-ton *Akagi*, which began building as a battle cruiser, was converted into an aircraft carrier because of Washington Treaty provisions. Completed in 1928, it and the *Hôshô*, along with four destroyers, formed the First Carrier Division of the First Fleet. The First Carrier Division was expanded into two when the reconstruction of the *Kaga* (38,200 tons standard after reconstruction) was completed in 1935, and these, the First and Second Carrier Divisions, were assigned to the First and Second Fleet respectively.[16] Along the way a small carrier, the 10,600-ton *Ryûjô*, was completed in 1933.

The rapid improvement in aircraft performance in the 1930s helped propel Japanese naval aviation forward. In about 1935 the Type 94 carrier bomber (D1A1, "Susie"), a great advance over previous models, was officially adopted. At about the same time, the accuracy of torpedo and dive bombing was greatly improved. Furthermore, it soon became apparent that long-range flying boats, land-based bombers, and similar craft would be effective adjuncts of carrier-based forces. They would take part in the pursuit of the American fleet, the destruction of its air forces, and the fighting of the decisive battle. By 1936 the Type 96 land-based medium bomber (G3M2, "Nell"), which had a range of 2,300 miles and was capable of both torpedo attack and level bombing, was ready for service.

Several developments of the year 1937 stimulated the proponents of naval air power. First, as of 1 January Japan no longer adhered to the limitation treaties and so could fortify the islands of Micronesia. Air bases there would allow naval air forces to strike the U.S. Navy from shore. Second, with the outbreak of fighting in China in midsummer and its escalation into a full-scale war in the fall, naval aircraft flew bombing missions into China's interior, demonstrating their long reach.

Accompanying these developments were improvements in naval air organization. In 1938 a "Combined Naval Air Wing Rule," integrating both land and sea-based aircraft, was instituted to insure the efficient operation of land-based naval air. In January 1941 the Eleventh Naval Air Fleet was organized from land-based squadrons, allowing for the first time in any navy the unified command of land-based air squadrons. In April of the same year the First Air Fleet was set up to coordinate carrier-based aircraft in large numbers.[17]

Japan's naval air forces grew apace. The Third Five-Year Replenishment Plan of 1937 (covering the years 1937-1941) increased the air arm by 14 groups to 53 in all. The Fourth Replenishment Plan of 1939 raised the total to 128 groups. And in 1940, with the increased tension in Japanese-American relations, the Fifth Replenishment Plan provided for 160 new groups for a grand sum of 288. Although this was only a plan, by December 1941 the navy had 3,300 aircraft as well as 10 carriers of various sizes.[18] With this rapid expansion and many land-based aircraft in Micronesia, the naval air corps was recognized as an increasingly potent force. By around 1939 the attack range of carrier-borne aircraft reached 200 miles, and the Replenishment Plan of 1940 included provisions for a major expansion of large and medium land-based attack planes, which were to be deployed throughout Micronesia. The role of naval air forces in interception-attrition operations was obviously increasing. In fact, some advocates of air power within the navy began to argue that battleships were useless in light of the new air weapons.[19] The sheer growth in the size of the naval air arm is testimony to a fundamental if largely unrecognized shift in the navy's strategic outlook. Aircraft were

seen increasingly as the principal weapon in interception-attrition operations, eclipsing surface craft and submarines. In other words, aircraft were beginning to be regarded as more important than ships.

The Concept of Interception-Attrition Operations in Japanese Naval Doctrine

Surprise Attack. In the Japanese navy, which had to fight the Sino and Russo-Japanese Wars with an inferior force of arms, the problem of "how to contend successfully against heavy odds" dominated strategic thinking, and therefore the preemptive or surprise attack was part and parcel of its approach. Such an emphasis was evident in army as well as navy thinking. In 1907 the first version of the Imperial Defense Doctrine (*Yōhei kōryō*) stated that "the navy shall conduct operations aimed at annihilating the seaborne forces of the enemy insofar as possible by forestalling him, and the army at gaining the advantage of holding the initiative by rapidly concentrating the required forces in an area before the enemy can do so."[20]

It is often said that the surprise attack on Hawaii was conceived by Yamamoto Isoroku, but such an attack was in the tradition of the navy. The idea of a surprise strike on Pearl Harbor was taken up in map exercises at the naval staff college as early as 1927.[21] Further, the staff college recommended in 1936 that "if the enemy's principal ships, especially aircraft carriers, are at anchor at Pearl Harbor before the war, it is important to aim at opening hostilities by taking the enemy unawares with an air raid (carrier-borne aircraft and large and medium flying boats)." It also recommended that "flying boats should be launched from around the easternmost point of GK [the Marshall Islands] for an attack on Hawaii and they should be resupplied from a seaplane tender positioned in advance in calm waters."[22] These plans led the navy to build such ships as the *Akitsushima* (4,650 tons), a tender capable of making repairs to flying boats and supplying them with fuel and ammunition.

Japanese naval tacticians attached great importance to clandestine torpedo attacks. Such attacks were to be carried out before the decisive battle by torpedo squadrons (mainly destroyers, seen in the navy as more of an offensive weapon than a defense for larger fleet units), torpedo cruisers, and midget submarines. Also, they tended to favor surprise and stealth over the open and direct attack when using submarines and their airplanes and related craft. The types of weapons they developed reveal this. For example, they built the *I-400* class submarines, capable of carrying three floatplane bombers, for striking at the Panama Canal, and the Amphibious Tank Type 4 (*Toku yon-shiki naikatei*) for attacking ships of the enemy fleet at anchor.[23] For attacking enemy fleet bases, they acquired flying boats that could be secretly refueled at sea by submarines.

Thus the Japanese navy, which seemed fated to fight with inferior forces, was predisposed to depend on weapons of surprise such as the submarine. As an early planning document put it, "We have no choice but to rely on submarines for some prospect of victory. It would be extremely difficult for our inferior forces to cope with the superior ones of the enemy using regular methods."[24]

Outranging. The surprise attack comprised the "interception" part of the navy's interception-attrition strategy. Another tactical principle, that of outranging, was the key to the "attrition" part. It aimed at hurting the enemy without losses to the Japanese side by developing weapons of superior range. It began, perhaps, with a fixation on big guns. The *Kongô*, built in England in 1911-13, had 14-inch guns, larger even than the 13.5-inchers planned for Britain's *Tiger* class at the time. Following World War I the *Nagato* was the first ship in the world to carry 16-inch guns, and four battle cruisers armed with 18-inch guns were also planned. The arms limitation treaties caused the 18-inchers to be canceled, but the tendency to order the largest possible guns remained strong among planners of the Naval General Staff.

The tactics developed for outranging during the interwar period are revealed in a naval staff college study of 1936: "Because our capital ships have 4,000-5,000 meters longer range, we will be able strike the enemy first by outranging him . . . . We will begin our bombardment at the maximum range of our main guns, thus executing outranging tactics while taking action as appropriate and executing a preemptive attack. Then at the opportune moment we will approach the enemy; as we begin to receive enemy fire at about 30,000 meters we will rush in to about 19,000 meters and annihilate the enemy fleet."[25]

The culmination of the outranging trend in gunnery was of course the *Yamato* class. The world's largest battleship, the *Yamato*, went down the ways in 1940 and was completed just after Pearl Harbor. It carried 18.1-inch guns with a range of 40,000 meters. It was joined ten months later by its sister, the *Musashi*. These behemoths, though running counter to the new emphasis on aviation, were monuments to the strength of the outranging idea.[26]

Naval leaders did not limit outranging to gunnery. The oxygen torpedo arose from their desire to have an underwater weapon with superior reach. And the long range of Japanese naval aircraft was not simply the result of the vast distances between Japanese island bases in the Pacific. If Japanese aircraft could fly further than the American, they could strike first. The Zero had a range of 1,900 miles.[27] Though it had to dispense with protective armor, it was a superior fighter of a range unmatched in the world's air forces. The Type 1 land-based bomber (G4M1 "Betty") carried so much fuel in unsealed tanks in the wings that it earned the nickname from Americans of "the one-shot lighter," but it had a range of 2,000 miles.

The Influence of Interwar Strategies and Their Weapons on the Pacific War

Expansion of the Interception Zone. The time-honored strategy of gradually intercepting and reducing the American fleet continued to exercise a powerful influence on Japanese naval doctrine as the war approached, but new weapons and new tactics developed within the old framework. Ônishi Takijirô, who achieved fame as the founder of the Kamikaze units near the end of the war, was serving in 1937 as chief of the education division of the Naval Aviation Department. In a paper entitled "Research on Air Armaments," he suggested that the old strategy could be furthered by naval air forces: "In the near future a fleet which consists of naval vessels, even including aircraft carriers and other escort air units, will no longer have the power to insure naval supremacy within range (approximately 1,000 miles) of a superior naval air force of large land-based aircraft."[28] He recommended that the navy give more emphasis to air armaments, reorganize the air bases in Micronesia, and plan to reduce the strength of the American fleet by air attack. Orthodox doctrine, which stressed "big ships and giant guns," was expressed by older formulations such as "the goal of our navy is to destroy the enemy fleet, and if we are able to do this, we will take care of everything," or "in short, our goal in war is to destroy the enemy fleet and our target will be the main force of that fleet."[29] The traditional view was further that "the decisive battle is the essence of combat, and combat should always be based on the decisive battle."[30] Ônishi did not attempt to repudiate these doctrines, but he saw both interception and attrition as being accomplished by land-based naval air forces. Also, as regards the decisive battle itself (the climax to follow interception and attrition), it is surely indicative of his influence, and of the change in Japanese naval thinking in general, that at the start of the war Japan had 10 carriers in comparison to America's 8.[31] Further, the Japanese navy put its own particular stamp on air operations that, though by no means fully worked out, still achieved important results. For example, the navy created the world's first land and carrier-based air strike forces (*kidô butai*).

In January 1940 Inoue Shigeyoshi, head of the Naval Aviation Department, submitted a paper entitled "New Arms Planning" to Navy Minister Oikawa Kôshirô. In this prophetic but little-heeded document, he criticized the Fifth Replenishment Plan as attaching too much importance to surface forces: "The activities of aircraft and submarines can easily prevent the capital ships of the U.S. Navy from appearing in the western Pacific. We stand no chance of winning a decisive naval battle [between fleets] unless the commander in chief of the U.S. Pacific Fleet is very ignorant or reckless." He argued for maintaining readiness for a long war by promoting aircraft and submarines. He stated firmly that it was necessary to "make preparations now so that

we can endure protracted warfare. The blitz tactic is easier to talk about than carry out."[32]

Shortly after the Russo-Japanese War, when the navy began to regard America as a potential enemy, it planned to use the Ryûkyû Islands as its advance base for intercepting the U.S. fleet. The battle was to take place in waters west of the Bonins. But as submarine and aircraft technology advanced, Japanese naval planners moved the early warning and interception-attrition lines to the Marshalls and East Carolines. In the mid-1930s it was believed that the final clash of the fleets would occur west of the Marianas. In 1940 the planners moved the patrol line to 160° E., with the decisive battle to take place east of the Marianas. In this way the navy expanded Japan's security zone steadily eastward using new weapons and new strategic concepts, despite the weakness of the overall posture of its battle fleet.[33]

Renunciation of the Arms Limitation Treaties and the Acceleration toward War. The historical process that brought Japan into the Pacific War includes many elements, such as the conclusion of the Tripartite Pact, Japan's fascination with Germany's overwhelming victories at the start of the war in Europe, and American pressure on Japan, particularly the cutoff of oil. The navy's decision finally to plunge into war, however, depended mainly on two factors. One was the so-called "gradual decline" argument, which held that if no positive action was taken the navy would run out of fuel bit by bit and the ratio of its forces to the American would worsen rapidly as time went on. The other, perhaps more important, was overconfidence in the interception-attrition strategy, which held out the prospect of victory even if the Japanese navy had smaller forces than the U.S. Navy.

At an Imperial Conference in September 1940, Nagano Osami, chief of the Naval General Staff, expressed his view of the interception-attrition strategy by saying, "It is my conviction that if we conduct interception operations in the sea areas we have designated for battle, the operations of aircraft, etc. will give us victory."[34] At a Liaison Conference on 1 November of that year, he stated he had greatest hopes that the United States was planning for a short war. He was convinced the navy could strike the American forces as they approached, bringing victory to Japan.[35] At a Supreme War Council meeting two days later, he voiced his convictions more strongly: "I have confidence that we have the best prospects for victory in the first stage of operations and in interception operations."[36] More expansively, he claimed, "If America approaches on the offensive, there will be a battle for the Micronesian islands. We will fight with the advantage of interior lines, inflict great damage on the American forces, and cause them to withdraw. If in this fashion we repeatedly wage advantageous battles for the islands in all places, it will be possible for us to maintain an invincible posture for a long period."[37] The conviction grew that even though Japan

was materially inferior, by using interception operations it had "a better than 50 percent chance of victory."[38] Such rationalizations made it easier for the navy to decide on war.[39]

One reason for this stand was the buildup of land-based naval air power in Micronesia. As naval leaders put it, "We must suppress our desire to build aircraft carriers, because if we act, it would provoke the other side into a ship-building competition. Japan must make the most of the geographical advantages which it alone possesses [in Micronesia]."[40] Indeed, the new conviction that Micronesia was a string of "unsinkable aircraft carriers" gave the navy the confidence to break away from the interwar system of naval arms limitation in the first place. The new air power buildup in the region, the navy argued, provided a match between modern armaments and the unique geographical situation of the Japanese Empire that assured victory.

A Split in the Wartime Leadership. In the several years before the war, Japan's naval leaders held that Japan could not fight a long war with the United States because of the great difference between the two countries in military strength, resources, and industrial output. They, and the army's leaders, who always saw the Soviets as their main enemy, looked to a German victory as a basis for Japanese initiatives. So far as the navy was concerned, the first of these initiatives would be to occupy strategic points in Southeast Asia. Such advances would secure resources that would allow Japan to fight a protracted struggle with the United States. Following these moves, Japan planned operations to "secure air and naval supremacy in the western Pacific, strengthen our strategic position, and check the activities of the American fleet or force it to attack us."[41] When the U.S. fleet advanced across the Pacific, the long-planned interception-attrition operations would be undertaken against it.

On 7 January 1941, less than a year before the beginning of the war, Yamamoto Isoroku submitted a paper, "Comments on Armaments," to Navy Minister Oikawa.[42] His premise was that the classical decisive battle that had always been assumed by naval planners, a battle with two entire fleets closing and deploying for a climactic torpedo and gunnery duel, might never take place. He pointed out that in past war games of such decisive battles the navy never achieved a convincing victory, and that these war games were usually suspended when it appeared that Japanese forces would be gradually whittled away. He insisted that the navy "deliver a fierce attack on the American fleet at the outset of hostilities to demoralize the U.S. Navy and the people of America beyond remedy." He thought that Japan could not win if it assumed a defensive posture at the start. If it did so, the more powerful U.S. Navy would decide the timing and direction of combat and would come to do battle with its entire strength. In other words, the traditional interception-attrition strategy would leave the initiative in the hands of the United States.

Further, lying in wait for the Americans would dangerously diffuse Japan's forces. Later Yamamoto argued, "Unless the navy takes the initiative and keeps pounding the enemy, how can we fight a prolonged war? We must always deliver fierce blows on the enemy and hit him where it hurts. Otherwise we cannot possibly establish ourselves in a defensible position."[43] His thinking was that "we must strike the U.S. fleet a blow at the initial stage and afterwards destroy each fleet as it sets out to keep the Americans from rising to their feet. Otherwise, Japan with its inferior national strength will be increasingly at a disadvantage as time goes by."

Many critics today point to Yamamoto and his idea of continuous offensive operations as being responsible for the unfavorable developments of the first year or two of the war. They say that because of Yamamoto, the navy had to fight the Battle of Midway without proper preparation and Japan got involved in the campaign on distant Guadalcanal, a campaign that was to sap the nation's strength with no gain. They maintain that the navy first should have secured a defensible economic sphere and refrained from risky offensive operations; this would have been better preparation for a drawn-out war.

At the time there were many officers, principally on the Naval General Staff, who favored the traditional interception-attrition operation. They believed that the coordinated use of carriers and land-based aircraft would make the best use of the Empire's territory, particularly its holdings in Micronesia. There was, therefore, a split in the navy's strategic thinking. On the one hand, Yamamoto and the Combined Fleet advocated aggressive operations; on the other, the General Staff held out for a more conservative approach that was reminiscent of the "fleet-in-being" philosophy. Yamamoto's position was dominant at the start, but the damaging vacillation in Japanese strategy later in the war, especially after his death, arose from this division of outlook.

A Historical Example: The Battle of the Philippine Sea. It was only late in the war, in June of 1944, that the Japanese navy actually carried out the interception-attrition operations which it had developed through many years of research and training. It was at the Battle of the Philippine Sea.

After defeat at Midway and Guadalcanal, Imperial General Headquarters decided on a new policy of operations. On 30 September 1943, some five months after Yamamoto's death, it determined that the entire strength of the navy should be devoted to the defense of a line connecting the Kuriles, Marianas and West Carolines. Everything within this line became the "absolute defense sphere," and the navy shifted its strategic focus to essentially defensive interception-attrition operations to preserve it.

Starting in early 1944 the navy deployed over 1,500 land-based naval aircraft to its various bases in Micronesia. They were to comprise the "unsinkable aircraft carrier" in the coming decisive battle against the U.S. Navy. The

coming operation was termed "A-gô," and naval air forces for it were deployed as follows:

- First Attack Group: Saipan, Tinian, Guam, and Truk;
- Second Attack Group: Palau, Yap, Peleliu, and Davao;
- Third Attack Group: New Guinea and the Celebes.

According to the plan for "A-gô," once the navy found out which area the enemy was going to strike, all aircraft in that area except for reconnaissance planes would be moved out of the range of U.S. air raids and then regrouped for a massive counterattack. The aim of this action was to "destroy at least one-third of the American carriers with land-based naval air forces before the decisive battle between Japanese and U.S. surface forces."[44]

In the event, "A-gô" was a disaster. Preemptive American air strikes put some 1,500 planes out of action before the Japanese plan could be fully implemented. U.S. air actions destroyed about 270 planes at Truk on 17 February, 123 planes at Saipan and Guam on 23 February, and 230 planes at Palau on 30 and 31 March. Also, MacArthur's landing at Biak on 27 May led Japanese naval headquarters to judge that the New Guinea area would be the target of American attacks. The Second and Third Attack Groups were accordingly committed to the Biak operations,[45] and when the Battle of the Philippine Sea was about to begin, these units had to be ordered back to their own bases. Half of them were lost before the battle because of lack of readiness, bad airfield conditions, and attrition in combat operations. Moreover, a large number of the aviators, perhaps as many as half of them, were suffering from malaria. It was said that these Attack Groups "virtually destroyed themselves before the 'A-gô' operation started."[46]

The First Attack Group, which had stayed in the Marianas area, had taken repeated poundings from U.S. air forces. Its original strength, estimated at 435 planes on 11 June, was reduced to about 156 planes by 18 June.[47] The 22nd Air Wing located on Truk had escaped the air raids, but it was intercepted by American fighters over Guam as it was being brought up for the battle. Most of its planes were lost.

The navy had for many years counted on the "Unsinkable Carrier Micronesia," but in the end it was of little use. A carrier without aircraft can do nothing.

Meanwhile, the Japanese surface force approaching the American forces in the Philippine Sea was following its own path to destruction. The outranging strategy was at the heart of its operations. Ozawa Jizaburô's First Fleet (Mobile Fleet) was inferior to Spruance's task force in almost every category. But Ozawa believed he had two tactical advantages. First, not knowing the full extent of damage to the land-based naval air forces, he intended to give battle with the assistance of the Japanese land-based aircraft on Rota, Guam and Yap. Second, Japanese carrier planes had a greater range

than the American. Japanese planes could attack at 350 to 400 miles, Mitscher's at only about 200; and the Japanese reconnaissance craft could reach out over 500 miles as opposed to the American ones, which could go only 350 miles at the most.[48]

Ozawa spotted Mitscher's Task Force 58 at 1540 on 19 June. He postponed his attack until the following morning because recovery of aircraft would had to have been made after dark, and also because the enemy fleet was too close for him to outrange it. The next day Ozawa launched 324 aircraft in five waves starting early in the morning.[49] By then the Japanese fleet was beyond the range of the Americans, some 400 miles distant, but this meant navigational difficulties for the Japanese aviators. Only two groups (192 planes) spotted the enemy fleet. They were detected by radar 150 miles from the main U.S. forces and intercepted by fighters 40 to 50 miles out. Only a few reached the U.S. main body. Those that did attack it were shot down by intense antiaircraft fire employing the VT (variable time, or proximity) fuse. Japanese pilots were able to score only one direct hit on the *South Dakota*, one on the *Wasp*, and near misses on the *Bunker Hill* and a cruiser.[50]

The navy also committed 36 submarines to the battle; only 16 of them returned.[51]

The interception-attrition strategy, an article of faith since the early years of the century, served the navy poorly at the Battle of the Philippine Sea. It was too complex and too timid. The practice of holding the enemy at extreme distance weakened the Japanese navy seriously. Perhaps a boxer can strike most effectively at the limit of his reach, but the same cannot be said of naval forces. In other battles, also, Japanese naval forces tended to fight cautiously. They were so anxious about losing irreplaceable ships that they would fire for hours at extreme ranges with little effect, as at the Battle of the Java Sea and the Battle of the Komandorski Islands.

Conclusion

Followers of Mahan in the Japanese navy believed implicitly in what they called Mahan's "divine dictum" that "coast defense against naval attack is comparatively easy because . . . ships . . . are at a recognized disadvantage contending against forts."[52] Their mistake was to apply this to the relation of carrier-based air to land-based air and to assume that the latter was superior to the former. In Micronesia, air bases were several hundred miles apart. The Japanese navy's land-based air power, so carefully nurtured in the 1930s, was forced to yield to a power upholding another Mahanian principle (learned from Jomini), that of "concentration and mobility." In other words, the U.S. Navy prevailed because it was able to build an overwhelming force of carrier-borne naval aircraft which was highly mobile and could be rapidly concentrated. This force neutralized the "Invincible Aircraft Carrier,

Micronesia" and was able to break into the "absolute defense sphere" much more quickly than the Japanese navy had imagined. It is also worthy of note that American advances, in particular their amphibious assaults, were facilitated by a factor to which Mahan had given only casual attention, that is, heavy naval gunfire against fortifications ashore.[53] (In the Japanese army it was estimated that a single battleship could supply the firepower of six army divisions.)[54]

Furthermore, the Japanese navy, which was supposed to outrange the enemy, was itself outranged by American early warning and air control made possible by radar. The Japanese made surprise attack their motto, but they were beaten by a technological surprise attack in the form of devices such as radar and the VT fuse.

After the war Fukudome Shigeru, who had served as chief of staff of the Combined Fleet and as head of the First Division of the Naval General Staff, spoke at a meeting of the Suikôkai, the postwar Naval Officers' Association. When asked about the general outcome of the war, he said, "In retrospect, we were outranged by America in everything . . . and had no chance of winning. The U.S.-Japan war itself may have been a case of outranging."[55]

Notes

I am grateful to Professor David C. Evans, Department of History, University of Richmond, for his kind help with the English text.

Japanese names are given in Japanese order, that is, surname first, and without military ranks or titles. Long vowels are indicated by the circumflex (^). "Miles" refers to nautical miles.

All works cited below were published in Tokyo unless otherwise noted.

1. Japan, Defense Agency, Bôei Kenshûjo Senshishitsu (National Institute for Defense Studies, hereafter NIDS), *Hawai sakusen* [The Hawaii Operation], Senshi Sôsho Series (Asagumo Shimbunsha, 1979), p. 38.
2. In the pre-World War II era, Japan's highest and most authoritative formulation of military policy, ultimately approved by the emperor, was the Imperial Defense Policy (*Teikoku kokubô hôshin*) and its allied documents, the Forces Necessary for Defense (*Kokubô shoyô heiryokuryô*) and Imperial Defense Doctrine (*Yôhei kôryô*). After the first formulation of these documents in 1907, they were revised in 1918, 1923 and 1936. See Japan, Defense Agency, NIDS, *Kaigun gunsembi, ichi* [Naval arms and war preparations, part 1], Senshi Sôsho Series (Asagumo Shimbunsha, 1969), pp. 59-74.
3. Tsuchiyama Hiroyasu, "Meiji yonjûichinen no enshû" [Naval exercises in 1908], *Tôgô* (November 1972), pp. 18-20.
4. Kaigun Hensan linkai, ed., *Kaigun* [Navy], vol. 4, *Taiheiyô sensô e no michi* [The road to the Pacific War] (Seibun Tosho, 1981), pp. 42-48.
5. The most serious instance of loss was the Mihogaseki disaster of 28 August 1928, in which one warship was sunk, three others severely damaged, and almost 150 lives lost during night maneuvers.
6. Fukui Shizuo, *Nihon no gunkan* [Japanese naval vessels] (Kyodo Shuppan, 1956), pp. 28-33.
7. *Ibid.*, pp. 34-44.
8. *Kaigun gunsembi*, pp. 163, 191.
9. Fukui, pp. 164-168.
10. *Kaigun*, vol. 4, p. 96.
11. Fukui, pp. 170-171 and Japan, Defense Agency, NIDS, *Sensuikanshi* [A history of Japanese submarines], Senshi Sôsho Series (Asagumo Shimbunsha, 1979), p. 33.
12. *Sensuikanshi*, p. 36; *Hawai sakusen*, pp. 160-163.
13. *Kaigun gunsembi*, p. 450.
14. *Ibid.*, p. 395.

15. Nihon Kaigun Kôkûshi Hensan linkai, ed., *Nihon kaigun kôkushi* [History of Japanese naval aviation], vol. 2, *Gumbi hen* [Section on armaments] (Jiji Tsûshinsha, 1969), pp. 29-41.

16. *Kaigun gunsembi*, p. 179.

17. Kaigun Hensan linkai, ed., *Kaigun* [Navy], vol. 13, *Kaigun kôkûtai* [Naval air corps] (Seibundo, 1981), p. 60.

18. *Nihon Kaigun kôkûshi*, p. 128. But according to a postwar statement, the number of operational aircraft was fewer than this.

19. Genda Minoru, *Kaigun kôkûtai shimatsu-ki: Hatten hen* [A record of how it was in the naval air corps: section on development] (Mainichi Shimbunsha, 1961), pp. 137-146.

20. Shimanuki Takeharu, "Nichi-Ro sensô ikô ni okeru kokubô hôshin, shoyô heiryoku, yôhei kôryô no hensen, ge" [Changes in Imperial Defense Policy, Forces Necessary for Imperial Defense and Imperial Defense Doctrine since the Russo-Japanese war, part 2], *Gunji shigaku* 9, no. 1 (March 1974): 9.

21. Takagi Sôkichi, *Shikan Taiheiyô sensô* [A private view of the Pacific War] (Bungei Shunjusha, 1969), pp. 13-16.

22. Fukui, pp. 180-181.

23. The submarine-borne Amphibious Tank 4 was to carry two torpedoes and could climb over reefs on its way to attack U.S. ships at anchor in a lagoon. But its propulsion system was unreliable. After the U.S. capture of Saipan in mid-1944, the project was canceled.

24. "Gumbi Seigen mondai ni kansuru kenkyû narabi ni ketsugi" [Research and a resolution concerning the problem of arms limitation], Naval General Staff document of 9 September 1920 (Kaigun Gunreibu, 1920), in *Sensuikanshi*, p. 24.

25. *Kaigun gunsembi*, pp. 171-172.

26. It is not generally known that the Fifth Replenishment Plan of 1940 included provision for a battleship with 50.5 cm (19.9 inch) guns.

27. The range figure is for the Mark 21. Equipped with detachable fuel tanks, it could fly 1,900 nautical miles at 180 knots and 13,100 ft. of altitude. See Arthur J. Marder, *Old Friends and New Enemies: The Royal Navy and the Imperial Japanese Navy, Strategic Illusions, 1936-1941* (Oxford: Clarendon Press, Oxford U. Press, 1981), p. 306.

28. "Research on Air Armaments" (Naval Air System and Training Center, 1937), p. 4. This document is located in the NIDS Archive, Tokyo.

29. Both quotations from Satô Tetsutarô, *Heiri* [The logic of arms] (Naval Staff College, 1918), p. 11.

30. Sanematsu Yuzuru, *Kaigun daigaku kyôiku* [Higher education in the Japanese navy] (Kôjinsha, 1975), p. 218.

31. The eighth U.S. carrier was the often forgotten *Long Island*, an escort carrier converted from a freighter in 1941.

32. Inone Seimi Denki Kankôkai, ed., *Inoue Seimi* [Inoue Shigeyoshi] (Inoue Seimi Denki Kankôkai, 1982), Appendix of documents, pp. 128-130.

33. *Kaigun gunsembi*, pp. 155, 162.

34. Nihon Kokusai Seiji Gakkai, ed., *Taiheiyô sensô e no michi, bekkan, shiryôhen* [The road to the Pacific War, appendix volume, documents section] (Asahi Shimbunsha, 1988), p. 512.

35. *Ibid.*, p. 554.

36. *Ibid.*, p. 557.

37. Fukudome Shigeru, *Shikan Shinjûwan kôgeki* [A private view of the Pearl Harbor attack] (Jiyu Ajia Sha, 1955), p. 121.

38. *Ibid.*, p. 135.

39. *Taiheiyô sensô e no michi, bekkan, shiryôhen*, p. 545.

40. *Ibid.*, p. 544.

41. Japan, Defense Agency NIDS, *Dai hon'ei kaigunbu. Dai Tôa Senso kaisen no keii* (2) [Naval Section of the Imperial General Staff. Particulars of the beginning of the Greater East Asia War, vol. 2], Senshi Sôsho Series (Asagumo Shimbunsha, 1979), p. 455.

42. *Hawai sakusen*, pp. 83-84.

43. Japan, Defense Agency, NIDS, *Midouee kaisen* [The naval battle of Midway], Senshi Sosho Series (Asagumo Shimbunsha, 1971), p. 17. This quote is from Yamamoto's speech of late April 1942 on lessons learned from the attack on Pearl Harbor.

44. Genda Minoru, *Kaigun kôkûtai shimatsuki. Sentô-hen* [A record of how it was in the naval air corps: section on combat] (Mainichi Shimbunsha, 1962), p. 224.

45. Japan, Defense Agency, NIDS, *Mariana oki kaisen* [The naval battle off the Marianas], Senshi Sôsho Series (Asagumo Shimbunsha, 1968), pp. 519-522.

46. Genda, *Sentô-hen*, p. 225.

47. Reliable sources give differing estimates of the number of Japanese aircraft on this occasion. According to Nakazawa of the Air Staff of the Combined Fleet, whose numbers I have quoted, there

were 136 planes on Saipan, 35 at Truk, 109 in the Biak area, and 155 at Palau on 11 June; see *Mariana oki kaisen*, pp. 520-521. Captain Omae Toshikazu (Toshikazu Ohmae) estimated a total of 540 planes as follows: 4 on Chichijima, 35 on Saipan, 67 on Tinian, 70 on Guam, 67 on Truk, 40 on Yap, 134 on Palau, 25 at Davao, 40 at Cebu, 42 at Kaoe and Wasile, Halmahera, and 16 at Sorong and Babo (Vogelkop); see Samuel Eliot Morison, *United States Naval Operations in World War II*, 15 vols. (Boston: Little, Brown, 1947-1962), 8:219.

48. Morison, 8: 248.

49. Nomura Minoru, *Kaisenshi ni manabu* [Learning from naval history] (Bungei Shunjû, 1985), pp. 201-202.

50. Morison, 8: 221-231.

51. *Sensuikanshi*, p. 333.

52. Alfred Thayer Mahan, *Naval Strategy* (Boston: Little, Brown and Co., 1911), pp. 139, 435.

53. Philip A. Crowl, "Alfred Thayer Mahan: The Naval Historian," in Peter Paret, ed., *Makers of Modern Strategy: From Machiavelli to the Nuclear Age* (Princeton, N.J.: Princeton Univ. Press, 1978), pp. 455-456.

54. Toyoda Soemu, *Saigo no Nihon kaigun* [The Japanese navy at the last] (Sekai no Nihon Sha, 1950), p. 138.

55. Notes of Fukudome Shigeru for talk at Suikôkai, n.d., p. 8. This document is located in the NIDS archive, Tokyo.

Ψ

Let us learn our lessons. Never, never, never believe any war will be smooth and easy, or that anyone who embarks on the strange voyage can measure the tides and hurricanes he will encounter. The Statesman who yields to war fever must realise that once the signal is given, he is no longer the master of policy but the slave of unforeseeable and uncontrollable events. Antiquated War Offices, weak, incompetent or arrogant Commanders, untrustworthy allies, hostile neutrals, malignant Fortune, ugly surprises, awful miscalculations—all take their seats at the Council Board on the morrow of a declaration of war. Always remember, however sure you are that you can easily win, that there would not be a war if the other man did not think he also had a chance.

Winston Churchill
My Early Life: A Roving Commission
(New York: Charles Scribner's Sons, 1930)