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Japanese Heavy Cruisers from the Treaty Era to the Solomons Campaign: Place in Imperial Strategy, Development, and Historical Impact, 1922-1942

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Charles Town, West Virginia

JAPANESE HEAVY CRUISERS FROM THE TREATY ERA TO THE SOLOMONS
CAMPAIGN: PLACE IN IMPERIAL STRATEGY, DEVELOPMENT, AND HISTORICAL
IMPACT, 1922–1942

A thesis submitted in partial fulfillment of the

requirements for the degree of

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in

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by

Tormod B. Engvig

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DEDICATION

I dedicate this thesis to my father, Olaf T. Engvig, who gave me the history bug.

ABSTRACT OF THE THESIS

JAPANESE HEAVY CRUISERS FROM THE TREATY ERA TO THE SOLOMONS
CAMPAIGN: PLACE IN IMPERIAL STRATEGY, DEVELOPMENT, AND HISTORICAL
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Tormod B. Engvig

American Military University, 22 November 2015

Charles Town, West Virginia

Dr. Robert Young, Thesis Professor

The following is a study of the Imperial Japanese Navy's heavy cruiser force, from the signing of the Washington Treaty in 1922 until the end of the Pacific War's first year. It traces Japanese heavy cruiser development in the context of prewar imperial strategy and naval doctrine, and goes on to examine this force's impact on the naval campaigns of 1941–1942. The study argues that while Japanese heavy cruisers were finely honed weapon systems—being tactically and technologically advanced, with highly skilled crews—their successes were largely squandered by lackluster senior leadership. While the cruisers inflicted significant damage on the Allied fleets in the Java Sea and in the Solomons, they were wedded to a navy undone by institutional shortcomings, inadequate logistics, and myopic doctrine.

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INTRODUCTION

During World War II, cruisers served a central function in every major navy. To the Imperial Japanese Navy (IJN) especially—whose heavy cruiser force is the focus of this thesis—the importance of these warships can not be overemphasized. The World War II-era heavy cruiser could trace its roots to the Victorian age of steam. By the end of the nineteenth century the cruiser had developed into two main types; the heavier armored cruiser and lighter protected cruiser. The armored cruiser—so called because it possessed both armored decks and a vertical armored belt—was a heavy warship second in offensive power only to that of a battleship. With the advent of the dreadnought-type battleship and battlecruiser in 1906, however, the armored cruiser was rendered obsolete. The protected cruiser—a lighter vessel which unlike its larger counterpart did not possess belt armor—meanwhile became the genesis for the World War I-era scout cruiser, the treaty cruiser's immediate predecessor.

After World War I there remained five great naval powers: Great Britain, the United States, Japan, France, and Italy. In the wake of the conflict these five powers stood poised for a renewed battleship arms race—one far more expensive, and possibly far more dangerous, than that which had soured Anglo-German relations before 1914—in which the cruiser's role was comparatively marginal; at best relegated to that of fleet scout and commerce raider. In the Pacific, Japan and the United States appeared poised for a naval arms race of epic proportions, while French and Italian desires for hegemony in the Mediterranean heralded the same on a somewhat smaller scale. On top of it all was the British Royal Navy, struggling to maintain its

traditional position of dominance. The battleship designs of this period were truly massive, equal in hitting power to the largest warships built immediately before and during World War II.¹

It was therefore in the five powers' best interest to pursue some sort of naval limitation agreement, lest they be faced with a financially ruinous and geopolitically destabilizing battleship arms race. What resulted was the 1922 Washington Treaty, a landmark event in twentieth-century naval and political history. While it curbed battleship construction, the treaty instead gave new life to the cruiser as the centerpiece of interbellum navies. As a result of the treaty's failure to place a building cap on auxiliary vessels, what would soon be called the treaty cruiser emerged as a spiritual successor to the dreadnought battleship. It was the armored cruiser born anew; miniature battleships around which the five navies sought to build their post-World War I fleets. While quantitative limits would in 1930 be placed on treaty cruisers—the ships at that time being divided into the more familiar heavy cruiser and light cruiser categories—they remained centerpieces of their respective fleets throughout the interbellum.²

During the 1904–1905 war with Russia, the IJN had used armored cruisers to great effect as battle fleet adjuncts, to offset the Russian Navy's numerical superiority in battleships. Japanese armored cruisers rendered outstanding service in that war, and proved their worth in engagements against larger Russian warships. Just as the armored cruiser had played an important function in the Russo-Japanese War, the treaty cruiser took on a central role in the IJN between 1922 and the dissolution of the Empire in 1945. The Japanese sought to create the finest treaty cruiser force in the world, and they largely succeeded in doing so. It is no coincidence that the IJN's fractious splintering and slide toward unbridled militarism began in earnest after the

¹ The British N3 battleship design, for example, would have displaced 48,500 tons—almost double that of the preceding *Queen Elizabeth* class—and armed with nine 18-in. (45.7-cm) guns; John Jordan, *Warships After Washington: The Development of the Five Major Fleets 1922–1930* (Barnsley: Seaforth Publishing, 2011), 25–30.

² Oi Atsushi, “The Japanese Navy in 1941,” in *The Pacific War Papers: Japanese Documents of World War II*, eds. Donald M. Goldstein and Katherine V. Dillon (Washington: Potomac Books, 2004), 24.

1930 London Conference—when the tonnage ratios for capital ships established at Washington were extended to cruisers.³

The Japanese Navy's collective failure throughout the 1930s to rein in its militant elements, or to look beyond its own parochial concerns, was a contributing factor to the Empire's catastrophic march to war with the Western Allies, particularly the United States. The IJN thus has to assume a significant share of the responsibility for fomenting what can only be called a suicidal war with a vastly superior military-industrial power. The first six months of the Pacific War was an unbridled string of Japanese successes, as they established a wide-ranging empire across the South Pacific—the shortest-lived in modern history. The IJN's heavy cruiser arm played an important role in securing naval superiority for these operations, and came into its own as a supremely effective fighting force. By the spring of 1942, Allied naval power had been swept from the South Seas, and Japan's hold on this resource-rich region was secure. Following on the heels of this success, the IJN struck into the Indian Ocean to keep the Royal Navy away from the Empire's new holdings, and Japanese cruisers were briefly engaged in commerce raiding.

After the disastrous conclusion of Japan's second stage offensive operations in the summer of 1942, culminating with its defeat at the Battle of Midway, the IJN settled into a defensive posture, consolidating its early gains while seeking to stop the inevitable incursions into its Pacific perimeter. The first serious Allied counterblow fell on the islands of Guadalcanal and Tulagi in August 1942. Thus began the Solomons Campaign, whose Guadalcanal phase would last until February 1943. In the battles around this obscure piece of South Pacific real estate—part of the most intense sustained naval campaign of World War II—IJN heavy cruisers

³ Asada Sadao, *From Mahan to Pearl Harbor: The Imperial Japanese Navy and the United States* (Annapolis: Naval Institute Press, 2006), 161.

showed themselves masters of night fighting. In one instance they came within a hair's breath of stopping the first American offensive of World War II dead in its tracks. However, the navy was consistently unable to turn tactical success into strategic attainment, although the opportunity to do so repeatedly manifested itself—especially early in the campaign, before American numbers began to have a decisive effect.

The eventual success of the American offensive on Guadalcanal was the beginning of Japan's inexorable march to total defeat. During this period, Allied airpower gradually overwhelmed the IJN, while the U.S. submarine arm ravaged Japan's maritime supply lines—the protection of which had been neglected in favor of a powerful battle fleet. Much as the Japanese Empire's days were numbered after 1942, so it was that after this time the heavy cruiser, like its larger battleship counterpart, was rendered obsolete as a surface warship in the face of carrier-borne aircraft. It is no small irony that, from 1943 to 1945, cruisers were increasingly relegated from surface combatants par excellence to antiaircraft support vessels for carrier groups. Heavy cruisers, as the backbone of interbellum navies, were after 1942 as obsolete in their traditional role as the dreadnought battleships they replaced.

There have been a number of books written on interbellum naval developments, IJN doctrine, Japanese warships, and the naval battles and campaigns of the Pacific War's first year. However, there is little which places Japan's treaty cruisers in the perspective of twentieth-century naval history. The thesis uses this force as the medium through which to explore IJN development, leadership, and doctrine, and compare how it anticipated fighting a war in the Pacific with how it actually experienced the first year of the conflict, when the IJN had its chance to operationally defeat the United States Navy (USN) Pacific Fleet. The study builds on previous

research to place this force in historical context: to critique and synthesize its strengths and weaknesses with the Japanese Empire, the IJN, and the Pacific War.

The thesis argues that the treaty cruiser building race was the interbellum's equivalent to the pre-World War I dreadnought rivalry, and these miniature battleships had central roles to play in naval history before and during World War II. IJN treaty cruisers were especially powerful, and were in many ways superior to the ships of rival navies. However, while this force was highly capable, and proved its tactical worth in the first year of the Pacific War, it was wedded to a navy undone by lackluster and timid leadership, inadequate logistics, and an inflexible and myopic doctrine. The IJN's obsessive quest for decisive battle turned certain elements of the Japanese fleet—like its night combat groups—into supremely proficient fighting units; part of Japan's elaborately choreographed prewar plans for interception-attrition operations.⁴ However, not only did the navy's institutional shortcomings contribute to a war against the United States; it also undid its own fleets' efforts by its inability to operationally cope with the USN, before the latter's overwhelming industrial superiority ruled it out forever.

A few words on this study's limitations need to be made here. The thesis traces Japanese cruiser development across the 20-year period from the start of the treaty era in 1922 to the end of 1942. After this time the IJN's war effort was increasingly improvised, and the heavy cruiser's traditional role rendered largely irrelevant. The thesis is narrowed specifically to encompass the Japanese heavy cruiser force, as much excellent coverage has already been given the IJN naval aviation and carrier arm. The Japanese submarine fleet similarly falls outside the scope of this study. Furthermore, the thesis assumes a contextual rather than a technical focus. While strictly technical data on the ships in question has its place, especially in Chapter II, it is not this study's

⁴ David C. Evans and Mark R. Peattie, *Kaigun: Strategy, Tactics, and Technology in the Imperial Japanese Navy 1887-1941* (Annapolis: Naval Institute Press, 1997), 275-76; Hiram Yoichi, "Japanese Naval Preparations for World War II," *Naval War College Review* 44, no. 2 (Spring 1991): 63.

main focus and is by no means intended to be exhaustive. For comprehensive technical data, the reader is referred to Eric Lacroix and Linton Wells' authoritative book, *Japanese Cruisers of the Pacific War*.

The study uses a mixture of metric and imperial measurements; for while Washington treaty tonnage was imperial, in the period under study the IJN used the metric system. The reader should also note that for the purposes of this thesis the terms heavy cruiser and treaty cruiser are used interchangeably. Treaty cruisers were known as such from the start of the treaty era in 1922 until 1930, when after the London Conference these ships were subdivided into the heavy cruiser and light cruiser categories. The 18 heavy cruisers with which Japan went to war in 1941 were all treaty-type designs. Japanese light cruisers of this time period were older, pre-treaty designs used as destroyer flotilla leaders, and were thus very different from their larger and more modern counterparts.

As this is a study devoted to the Japanese Pacific War experience, references to Japanese individuals follows traditional Eastern convention, placing surname first and given name last. It also uses the Japanese names for naval battles as outlined in Lacroix and Wells, and Paul Dull's *A Battle History of the Imperial Japanese Navy*. Where the names of these engagements differ from those given by the Allies, this is so indicated. Additionally, as its title and chapter headings suggest, the thesis assumes a thematic structure. Lastly, it is acknowledged that as this author lacks Japanese, the primary and secondary sources used are limited to those originally written in English or translated from Japanese.

GLOSSARY OF KEY TERMS

Cruiser Division (*sentai*): IJN operational formation, at the start of the Pacific War composed of two to four heavy cruisers, typically of the same class. *Sentai* 5, for example, normally included the four *Myoko*-class ships, while *Sentai* 8 was composed of the two *Tone*-class ships.

Decisive Battle Doctrine (*kantai kessen*): The overarching IJN doctrinal principle of the interbellum, in which victory hinged on a single decisive fleet engagement. The Japanese would attrite the USN with aircraft, submarines, cruisers, and destroyers as the Americans moved west across the Central Pacific, then meet its remnants with the IJN Combined Fleet and destroy it with battleship gunfire, after a preparatory night attack.

Interception-Attrition Operation (*yugeki zengen sakusen*): An essential part of the IJN's decisive battle doctrine, in which Japanese night combat groups, submarines, and aircraft would subject the USN Pacific Fleet to attritional attacks, as the latter sallied from Hawaii and the U.S. West Coast. This was to reduce the American forces in anticipation of the decisive fleet engagement.

Japanese Names of Naval Engagements: The Japanese names for the Pacific War's naval battles referred to in this study often differ from their Western titles. For the sake of convenience to the reader they are listed here chronologically, with their more common Western names in parentheses: Sea Battle off Surabaya (Battle of the Java Sea), Sea Battle off Batavia (Battle of the Sunda Strait), First Battle of the Solomon Sea (Battle of Savo Island), Sea Battle off Savo Island (Battle of Cape Esperance), South Pacific Ocean Sea Battle (Battle of the Santa Cruz Islands), Third Battle of the Solomon Sea (Naval Battle of Guadalcanal), and Battle of Lunga Point (Battle of Tassafaronga).

Night Combat Group (*yasengun*): IJN surface groups specially trained for night surface combat with torpedoes and gunfire. These were tactical formations capable of independent operations, and by the late 1930s were composed of fast battleships, cruisers, and destroyers. Together, these groups made up the IJN's Night Battle Force (*Yusen Butai*).

Treaty Cruiser: Surface warship designed in the wake of the 1921–1922 Washington Conference, limited to a treaty-stipulated 10,000-ton “standard” displacement and 8-in. (20-cm) caliber main armament. Treaty cruisers were after the 1930 London Treaty subdivided into heavy cruisers, with main armament greater than 6.1 inches (15.5 centimeters), and light cruisers, with main armament of 6.1 inches or less. The Japanese possessed 18 heavy cruisers at the start of the Pacific War.

Treaty Era/System: The period in naval history encompassing the naval limitation treaties which were in force between 1922 and 1936. Convened in order to avert a destabilizing battleship arms race (of the kind which had helped spark World War I), the treaty era gave rise instead to the treaty cruiser, and advances in alternative naval technologies, including aircraft carriers, submarines, and flotilla craft. The treaty system finally lapsed in the face of deteriorating peace prospects.

CHAPTER I

THE HEAVY CRUISER'S PLACE IN IMPERIAL STRATEGY, 1922–1941

Japanese treaty cruisers traced their doctrinal origins to the use of armored cruisers in the 1904–1905 Russo-Japanese War. Before the advent of the dreadnought-type battleship and its offshoot, the battlecruiser, armored cruisers represented the second most powerful type of warship after the pre-dreadnought battleship. While armored cruisers continued to be used throughout World War I, they were by that time hopelessly outclassed—as illustrated by the fate of the Imperial German Navy's armored cruisers at the Battles of the Falkland Islands and Dogger Bank.⁵ The IJN's deployment of armored cruisers in the Russo-Japanese War thus represented the last success of the type as a near-capital ship, before the ascendancy of its treaty cruiser successor in the wake of the 1921–1922 Washington Conference.

During the Russo-Japanese War, the IJN found itself at a numerical disadvantage to the Imperial Russian Navy. This is an important consideration, as IJN doctrine between 1922 and 1941 can not be properly understood without grasping the influence the perception of always being in a quantitatively inferior position had on Japanese naval leaders. The need for warships of superior quality was one of the IJN's cardinal tenets, from the turn of the century to the start of the Pacific War. During the 1894–1895 Sino-Japanese War, the IJN had deployed theoretically inferior, lightly armored cruisers against the Chinese Navy—the latter of which included two German-built ironclad battleships, the most powerful naval units of any Asian power at the time. Nevertheless, at the Battle of the Yalu on 17 September 1894 the IJN prevailed by its greater homogeneity in forces, greater volume and accuracy of gunfire, and perhaps most importantly, superior crew training and leadership. Japanese naval leaders would

⁵ In both cases the armored cruisers were sunk by British battlecruisers—ships technologically superior in every way to their German opponents; Bernard Ireland, *Jane's Battleships of the 20th Century* (London: Harper Collins Publishers, 1996), 104–05, 112–13.

after the war with China go to great lengths to ensure they maintained a clear edge in fighting quality against any potential opponent.⁶

At the start of the Russo-Japanese war, the IJN possessed six pre-dreadnought battleships to the Russian Pacific Fleet's seven.⁷ However, within two months of the war's start the armored cruiser balance favored Japan, which by April 1904 had eight ships against the Pacific Fleet's four. The Japanese cruisers were destined to play a central role in the naval war, especially after the Japanese lost two of their battleships, *Hatsuse* and *Yashima*, to Russian mines that May. The armored cruisers took on the role of replacement battleships, specifically slated for inclusion in the Japanese battle line. Despite their smaller size and lighter armor, the cruisers proved about as capable of matching Russian battleships as their larger consorts. Though their 8-in. (20-cm) caliber main guns were smaller and had shorter range than those of their Russian opponents, the Japanese ships could fire faster and more accurately.⁸

Before World War I, Japanese industry did not possess the technical knowhow to produce large, modern warships, and the IJN's armored cruisers of this period were built in four different European nations. Despite its multinational heritage however, this force was, unlike the Russian Navy's battleships and cruisers, a modern and homogenous unit. Continuing another Japanese trend, the ships were also manned by well-drilled crews, and commanded by officers of the highest caliber. These were members of a young but self-assured and battle-tested fleet—modeled on the Royal Navy but with a spirit all its own—and their performance reflected their capability. IJN armored cruisers went on to play central roles in the three major naval battles of

⁶ Evans and Peattie, *Kaigun*, 15–17, 19–20, 39–40, 48; one of the German-built Chinese battleships was captured at the Battle of the Yalu and incorporated into the IJN; Hansgeorg Jentschura, Dieter Jung, and Peter Mickel, *Warships of the Imperial Japanese Navy, 1869–1945* (Annapolis: Naval Institute Press, 1986), 14.

⁷ The Russian total does not include the 13 battleships it could—and would—divert from its Baltic Fleet into Asian waters, if the war dragged on for any significant period of time; Evans and Peattie, *Kaigun*, 90–91.

⁸ Evans and Peattie, *Kaigun*, 60; Jentschura, Jung, and Mickel, *Warships of the Imperial Japanese Navy*, 72–76; Koda Yoji, “The Russo-Japanese War: Primary Causes of Japanese Success,” *Naval War College Review* 58, no. 2 (Spring 2005): 21–22.

the war: the 10 August 1904 Battle of the Yellow Sea, 14 August 1904 Battle of Ulsan, and the smashing Japanese victory at the 27–28 May 1905 Battle of Tsushima Strait. As will be shown, Tsushima would in fact have a tremendous, and ultimately baleful, effect on IJN strategy and doctrine in the years to come. In any case, when the Japanese delegation, led by Navy Minister Kato Tomosaburo, arrived at the Washington Conference on 12 November 1921, the cruiser had already played an important role in the IJN's meteoric rise from a miniscule coastal defense force to the world's third largest navy.⁹

The end of the Russo-Japanese War, and especially the IJN's decisive victory in the Battle of Tsushima, effectively eliminated the Russian Navy as a credible threat to Japanese ambitions. In the minds of IJN leaders, the need arose to designate a hypothetical enemy in order to ensure its parity with what could be called Japan's senior service, the Imperial Japanese Army (IJA). After 1905, the only other nation that could pose a threat to Japanese maritime hegemony in the Western Pacific was the United States. The USN had in fact as early as 1906 drawn up its first version of War Plan Orange, subsequent installments of which would come to dominate American naval strategy for a war against Japan for the next 35 years.¹⁰ The Royal Navy, while capable of intervening in Asia, was from 1902 to 1922 closely linked with Japan through the Anglo-Japanese Alliance. Therefore, when the 1907 Imperial National Defense Policy was formulated, it designated the USN as the IJN's hypothetical enemy number one. While there was a certain amount of Japanese-American tension during this period—two big issues being competing designs for China and American hostility toward Japanese immigrants in California—few at the time could foresee the long-term ramifications of Japan's decision, made from the

⁹ Jentschura, Jung, and Mickel, *Warships of the Imperial Japanese Navy*, 15–21, 72–76.

¹⁰ War Plan Orange would go on to be the spiritual basis for the USN's 1943–1945 Central Pacific Campaign, and its legacy on U.S. naval operations in World War II was significant; Asada, *From Mahan to Pearl Harbor*, 108.

ostensibly harmless premise of ensuring the navy's continued funding and relevance, as relations between the two nations crumbled in the 1930s.¹¹

Between the drafting of the Imperial National Defense Policy and the start of the Washington Conference, the world was turned on its head by World War I, in which Japan had taken nominal part as a member of the Allies for entirely self-serving reasons. While Germany, Austria-Hungary, and Russia disappeared as naval powers in Europe in the wake of the conflict, two separate naval arms races loomed large in its immediate aftermath. In the vacuum left by the disappearance of the Austro-Hungarian Navy, Italy and France began to see each other as rivals for hegemony of the Mediterranean. On a far larger scale, however, was the looming naval arms race between the United States and Japan in the Pacific. During the war, Japan acquired Germany's Pacific possessions, including the Mariana, Marshall, Caroline, and Palau Islands, which lay astride the American Central Pacific route to the Philippines. The United States, with moves to create the greatest navy in the world and determined to maintain its cherished Open Door Policy in China, so alarmed Japan that the latter increased its naval budget fivefold between 1917 and 1921. Japanese scholar Asada Sadao suggests that the immediate background for the Washington Conference lay in the very serious 1920–1921 Japanese-American war scare brought on by the aforementioned events, further exasperated by U.S. notions of the “Yellow Peril.”¹² A conference to limit naval armaments could not have come a moment too soon. It is not too far-fetched otherwise to imagine a Great Pacific War fought between Japanese and American superdreadnought fleets in the 1920s.

In a geopolitical sense, the IJN's leadership from the signing of the Washington Treaty to the start of the Pacific War was characterized by its collective failure to rein in an increasingly

¹¹ Asada, *From Mahan to Pearl Harbor*, 21.

¹² *Ibid.*, 58–60.

militaristic element, especially after 1930. This Young Turk component was largely composed of middle-echelon officers—captains and commanders—who saw the treaty system’s imposition of inferiority as a virtual declaration of war on Japan.¹³ As will be addressed, this became especially acute after the London Treaty placed a quantitative limit on treaty cruiser construction, which the navy had come to view as an extremely important vessel type in light of the Washington Treaty’s restrictions on capital ships. Since time out of mind all armed services have had their vocal, militaristic component. The difference in the IJN’s case was that this parochial element was allowed to gain effective control of naval policy. This was further exasperated by the fact that the IJN wielded more influence over its nation’s policymaking than any other World War II-era sea service. According to the old Japanese Constitution, the Prime Minister and the Navy Minister were forbidden from offering any opinions regarding operational plans to the Emperor Showa—who in any case never vetoed the desires of the Chief of the Naval General Staff.¹⁴ There is a tendency in the West to see the Japanese nation and culture as a monolith; homogenous and devoted to harmony, proper form, and respect for authority. These stereotypes were skillfully concealed in the 1930s, as the Japanese military succumbed to what was called *gekokujo* (pressure from below).¹⁵ In the perceived need to placate its middle-echelon, the military leadership set Japan on the road to war with an overwhelming array of enemies.

By focusing on its own narrow material concerns, the IJN failed to see beyond the navy to what was best for the Japanese Empire as a whole. In the aftermath of World War I the quest for autarky was a central theme in Japanese geopolitical strategy. The desire to create an economically self-sufficient nation able to wage total war if the need arose—as Germany had

¹³ Ibid., 161.

¹⁴ Chihaya Masataka, “Organization of the Naval General Staff Headquarters in Tokyo,” in *The Pacific War Papers*, 39.

¹⁵ Asada, *From Mahan to Pearl Harbor*, 197.

failed to do in 1914–1918—was a prominent goal of Japanese planners in the interbellum. Any future conflict was likely to be a drawn-out affair, requiring the full mobilization of the industrial as well as military potential of Japanese society. However, the realistic attainment of this goal all but disappeared in the face of inter-service rivalry, concerned more with its own insular concerns than the Empire’s preparedness for total war. In their narrow-minded clamor for pride of place and resource allocation, the IJN and IJA not only helped set the empire on a disastrous course; the services undermined Japan’s ability to consolidate its economic position in Asia without foreign intervention, and thus to have any chance—as a resource-deficient island nation—of winning a long war. In 1941, the navy acceded to war, and even insisted that the United States had to be included in it, in return for materials allocations. To have done otherwise would have been to marginalize its own role and to surrender these resources, and the navy’s prestige, to the army.¹⁶

It can be said that the IJN saw its preparations for war largely in terms of its rivalry with the IJA. The USN may have been the navy’s hypothetical enemy number one (to ensure national support for a strong fleet), but the Japanese Army was its primary budgetary enemy (to acquire the necessary materials allocations in the first place). To begin with, in Japan’s case the question of army versus navy primacy was exacerbated by several issues. The Japanese Empire was unique in that it was simultaneously a land power and a naval power. Its imperial ambitions on the huge Asian continent implied the need for a sizable land force. Meanwhile, the need to maintain maritime communications with these forces, as well as to defend the islands of Japan proper, implied the need for a strong navy. The only other nation that can be said to have been

¹⁶ After World War I, Japan established the cabinet-controlled *Kikaku-in* (Planning Board) to forge a coherent geopolitical strategy, but this came to little; Michael A. Barnhardt, *Japan Prepares for Total War: The Search for Economic Security, 1919–1941* (Ithaca: Cornell University Press, 1988), Kindle eBook Loc. 575–91, 3498–3508, 3604–31, 3695–3715; Yokoi Toshiyuki, “Thoughts on Japan’s Naval Defeat,” in *The Japanese Navy in World War II: In the Words of Former Japanese Officers*, ed. David C. Evans (Annapolis: Naval Institute Press, 1986), 501–05.

geopolitically similar was the British Empire—whose Royal Navy was decidedly the senior service, and which in any case did not have aggressive designs on the European continent, and thus did not require an army the size of Japan's. Another issue was the Japanese lack of parliamentary tradition, and the deterioration of civilian authority over military matters in the decades before the Pacific War. This enabled the armed services to wield tremendous power in the government, and against each other. Naturally, planners within the army and navy hierarchy competed fiercely for the status of their respective services. The IJN's adaptation of the decisive battle doctrine—pioneered by late nineteenth-century U.S. naval theorist Captain Alfred Thayer Mahan (and more of which will be said later)—as a way to gain ascendancy over the IJA, needs to be understood in this light.¹⁷

Japan, as a resource-poor nation, never really possessed the means to maintain both a world-class army and navy. To build up one the other had to make sacrifices, particularly in steel and fuel allocations. On balance, it must be said that on the eve of the Pacific War the IJN had received the better end of this materials tug-of-war, with a modern and powerful fleet—including a strong cruiser backbone. The IJA, conversely, lacked the mechanized combat power to face well-equipped adversaries on open ground—as was made abundantly clear in its border skirmishes with the Soviet Union in 1938 and 1939. Desires for materials prioritization also affected the two services' favored strategies. The IJA, naturally, stressed the danger of the Soviet Union in large part to maintain its existing allocations. The IJN on the other hand, fully aware of the marginal role it would play in any land war on the continent, and desirous of huge steel and fuel allocations for warship construction, stressed the danger of the USN and the need to strike

¹⁷ Toshi Yoshihara and James R. Holmes, "Japanese Maritime Thought: If not Mahan, Who?" *Naval War College Review* 59, no. 3 (Summer 2006): 24–25, 27–29.

south.¹⁸ The navy's perceived need for heavy cruiser tonnage thus affected its relationship with the army, and impacted imperial policy.

Competition, animosity, secrecy, and grudging compromise characterized Japanese army-navy relations before and during World War II, rather than cooperation or even a common policy. While inter-service rivalries are nothing new and have plagued militaries throughout history, in the case of Japan this rivalry was so deep-seated that it effectively sabotaged a coherent imperial strategy. In the wake of its drubbing by the Red Army on the Mongolian border, and the July 1941 U.S. freeze on Japanese assets (which soon hardened into a de-facto oil embargo), the IJA came around from its northern policy to support the navy's idea of a southern advance. Initially the army had, not unwisely, argued for excluding the Philippines—and by extension, the United States—from the Japanese offensive. However, the navy insisted on the indivisibility of Britain and America. While it is certainly true that late 1941 Anglo-American relations were more conducive to an alliance than had been the case only a year before, the primary reason for the IJN's insistence on including the United States in a war on the Allies in Asia stemmed from the fact that—having viewed the USN as its hypothetical enemy for over three decades as a way to justify its buildup—the IJN could not fathom a war without it. Seeing the United States through Japan's cynical geopolitical lens, the navy did not want to risk leaving its flank open by bypassing the Philippines; in America's place Japan would not, given such an opportunity, have hesitated to strike. The hostile, racist clamoring of Mahan and many other Americans notwithstanding, to assume that the United States would aggressively attack Japan in a moment of weakness does scant credit to the worldview of Japanese naval leaders.¹⁹

¹⁸ Barnhardt, *Japan Prepares for Total War*, Loc. 2958–66.

¹⁹ Mahan, who died in 1914, was virulently anti-Japanese, and wholly subscribed to the idea of the Yellow Peril; Asada, *From Mahan to Pearl Harbor*, 18, 36, 59–60, 237–38; Barnhardt, *Japan Prepares for Total War*, Loc. 5909–

When the Washington Conference was convened at the invitation of U.S. President Warren G. Harding on 12 November 1921, the Japanese delegation was headed by an individual decidedly more cosmopolitan than most of his naval peers. Navy Minister Kato Tomosaburo arrived at the negotiating table determined to make an effort to limit naval armaments and stave off a Pacific arms race. Kato was a total war officer; rather than taking a narrow tactical or operational view of IJN affairs, he viewed Japanese naval expansion in a geopolitical context. He understood the value of a limitation treaty for Japan—even one where it had to accept an inferior tonnage ratio. Trying to match the United States in a battleship arms race was ultimately futile given that nation's tremendous industrial potential. While not immediately inclined to spend vast sums on naval construction, the United States could, with the blessing of its congress, out-produce any potential enemy if it felt threatened. The farsighted, albeit fleeting, legacy of the IJN at Washington was very much the legacy of Kato Tomosaburo.²⁰

The Washington Treaty, which went into effect on 6 February 1922, was one of the groundbreaking events of the twentieth century. It had a major influence on interbellum naval construction, and was central to the development and doctrine of the navies that would ultimately face one another on the high seas in World War II. First and foremost, the treaty set out to curb the construction of huge and expensive battleships. Quantitative ratios for these vessels were established at 525,000 tons for Great Britain and the United States, 315,000 tons for Japan, and 175,000 tons for France and Italy. Aircraft carrier ratios were also set, at 315,000 tons for Great Britain and the United States, 81,000 tons for Japan, and 60,000 tons for Italy and France. Additionally, battleships were limited to 35,000 tons individual displacement and 16-in. (40.6-cm) caliber main armament, while carriers were individually limited to 27,000 tons.

23; Nomura Kichisaburo, "The Diary of Admiral Kichisaburo Nomura, June–December 1941," in *The Pacific War Papers*, 158–61.

²⁰ Evans and Peattie, *Kaigun*, 192–93.

Furthermore, the treaty stipulated a 10-year “battleship holiday” in which no new capital ships would be constructed. These quantitative limitations did not extend to what the treaty called auxiliary warships, defined as any vessel of 10,000 tons displacement and 8-in. caliber armament or less.²¹ With this the treaty cruiser was born. While the conference succeeded in stymieing a looming battleship rivalry, it sowed the seeds for a cruiser building race which would go unchecked until the 1930 London Conference. Japan embraced the treaty cruiser with alacrity, seeing in this type of vessel the means to offset its inferior tonnage ratio of 3:5:5 in battleships to Great Britain and the United States. To the IJN, the treaty cruiser was a substitute battleship in every way.²²

A major reason why the Washington Conference succeeded—where later limitation conferences did not—was because naval tonnage ratios were not discussed in a vacuum. The conference was part of a wide-ranging treaty *system*; one that went beyond warship construction to seek an economic and political outline for peaceful coexistence between Japan, the United States, and Great Britain in Asia and the Pacific. There would, after all, be no naval limitation if Japan and the United States could not agree on China. The delegates at Washington understood this relationship between naval and political matters; many of their successors did not. The conference thus resulted in the Five-Power Treaty, which was a significant step toward détente in the Pacific. While for Japan it meant the end of the Anglo-Japanese Alliance, it also led to the nonfortification of American Pacific bases. Taken together, this effectively demilitarized the Western Pacific, making any aggressive moves by the USN toward Japan extremely unlikely.²³

²¹ The Washington Treaty established a “standard” displacement by which all vessels would be measured; before this time, displacement had been calculated according to the individual practices of each navy; Jordan, *Warships After Washington*, 48–55, 65–68.

²² Asada, *From Mahan to Pearl Harbor*, 105–06; Oi, “The Japanese Navy in 1941,” in *The Pacific War Papers*, 24.

²³ Asada, *From Mahan to Pearl Harbor*, 62–68.

While the treaty could be called a triumph for Japanese-American relations, the United States was essentially the winner at Washington. It attained capital ship superiority over Japan, the end of the Anglo-Japanese Alliance, and the scrubbing of a financially unpopular naval program at home. This did come at the cost of fortified forward bases in the Western Pacific, which sealed the fate of the Philippines in the event of a Japanese-American war. However, with its tremendous industrial potential, the United States had every reason to look to the future with confidence—was any potential rival inclined to renege on its treaty obligations. Japan, in comparison, simply lacked the influence as a “foreign” empire to secure the parity in naval construction that the IJN wanted. Thankfully, the farsighted Kato realized that Japan not only benefitted from the clause prohibiting U.S. base fortification in the Pacific, but also that its stipulated 6:10 ratio in capital ships to the USN was hardly a real impediment, as the United States, besides possessing a much larger industrial base for shipbuilding, had two oceans to police.²⁴

Kato’s eminent logic failed, however, to placate many within the IJN leadership. The decades after Washington saw the political fracturing of the IJN and its separation into two hostile camps. This upheaval eventually led to the Japanese abrogation of the treaty system, and did much to set Japan on the road to war with the Allies. Kato, seeing the IJN as an essentially nonbelligerent deterrence force, became the torchbearer for the voices of reason, which notably included 1937–1940 Navy Minister Yonai Mitsumasa, and the 1939–1943 Combined Fleet commander, Admiral Yamamoto Isoroku. However, after Kato’s untimely death to cancer in 1923, his faction lost influence to the hardliners. The latter found their spokesperson in the volatile Vice Admiral Kato Kanji, President of the Naval Staff College (and no relation to Tomosaburo). Kanji and his ilk—spearheaded by his spiritual successor Admiral Suetsugu

²⁴ Jordan, *Warships After Washington*, 69–72.

Nobumasa—held to the unshakable belief that the only way to ensure Japan had a fighting chance against the USN was if it possessed a 7:10 ratio or better in naval tonnage. This was based on research conducted at the Naval Staff College in 1907–1909 by Japanese naval theorists Sato Tetsutaro and Akiyama Saneyuki, and for the hardliners was a sacred tenet. Tomosaburo's acquiescence for a 6:10 ratio in capital ships with the Anglo-Americans at Washington was therefore deeply traumatic.²⁵

Disaffection with the IJN's position of inferiority led the hardliners to push relentlessly for maintaining a qualitative edge in warship design and personnel training. While this had been the IJN's modus operandi since the Sino-Japanese War, in the treaty era the hardliner-inspired focus on quality over quantity took on extreme forms. As the new mainstay of the surface fleet, the treaty cruiser's place in this policy was significant. First and foremost was the fact that IJN treaty cruisers actually exceeded the 10,000-ton limit established at Washington. A heavier ship meant a more powerful ship. The *Takao* class, built between 1927 and 1932, was the most egregious violator at 11,350 tons standard displacement when completed. The cause for the cruisers' excessive weight has never been clarified, but it is reasonable to argue that exact adherence to the tonnage limit was of little interest to the hardliners on the Naval General Staff who influenced construction. They probably saw the limit more as a guideline than a hard rule, and in any case as someone else's (i.e. the government's) problem.²⁶

From a doctrinal standpoint however, the manifest result of the push for quality at all cost was in the rigorous training of naval personnel. The IJN's shortage of fuel oil further intensified

²⁵ Agawa Hiroyuki, *The Reluctant Admiral: Yamamoto and the Imperial Navy*, trans. John Bester (New York: Kodansha International, 1979), 28–29; Chihaya Masataka, "An Intimate Look at the Japanese Navy," in *The Pearl Harbor Papers: Inside the Japanese Plans*, eds. Donald M. Goldstein and Katherine V. Dillon (Washington: Brassey's, 1993), 319–20; Evans and Peattie, *Kaigun*, 143–44, 195–96.

²⁶ Evans and Peattie, *Kaigun*, 228–29; Jordan, *Warships After Washington*, 98; Eric Lacroix and Linton Wells II, *Japanese Cruisers of the Pacific War* (Annapolis: Naval Institute Press, 1997), 814.

training; drills often commenced as soon as a vessel left port to make the absolute most out of the fuel expenditure. It was grimly joked that a standard IJN training week consisted of “Monday, Monday, Tuesday, Wednesday, Thursday, Friday, and Friday.”²⁷ So intense was the navy’s training regime that it not infrequently led to collisions, ship sinkings, and deaths. During night torpedo exercises in August 1927, four ships collided at high speed resulting in 133 casualties and the loss of a destroyer, with heavy damage to another destroyer and two cruisers. Emphasis was placed on day and (especially) nighttime tactical training, and for added adversity and realism the maneuvers were often conducted in heavy weather in the frigid North Pacific. Its rigorous and sometimes fatal nature aside, the IJN’s obsession with the tactical proficiency of its vessel crews, as way to make up for its quantitative inferiority vis-à-vis the USN, paid dividends when the time came to fight. However, this training, while thorough, was largely offensive in nature. Damage control, for example, was neglected until the last decade before the Pacific War, and as events would prove, Japanese proficiency in this field lagged behind that of the USN throughout the conflict.²⁸

The Washington Conference was but the first in a series of talks held during the treaty era. Subsequent conferences revolved around the question of cruiser tonnage, as by the late 1920s the type had become a centerpiece in all the major navies. The next conference to be convened was that which opened at Geneva on 20 June 1927. However, it quickly fell to pieces when the United States and Great Britain failed to reach any agreement on cruiser tonnage. At Geneva, Japan played third fiddle to the acrimonious Anglo-American debates, but by carefully supporting Britain hoped that it could secure the sacrosanct 7:10 ratio with the Anglo-Americans for its cruiser construction; this as a way to offset the 6:10 ratio in capital ships it had been

²⁷ Oi, “The Japanese Navy in 1941,” in *The Pacific War Papers*, 18.

²⁸ Oi, “The Japanese Navy in 1941,” in *The Pacific War Papers*, 15–18; Mark Stille, *USN Cruiser vs. IJN Cruiser: Guadalcanal 1942* (Oxford: Osprey Publishing, 2009), Kindle eBook Loc. 791–99.

obliged to accept at Washington. In any event, nothing came of these proposals and the Geneva Conference broke up ignominiously on 4 August, having achieved little. But Japan was not to blame for its outcome.²⁹

The subsequent 1930 London Conference had wide-ranging ramifications for Japan and the IJN. It was a watershed where the legacy of Kato Tomosaburo and the moderates was displaced by the hardliners. Although the moderates had been steadily losing ground since 1922, after the 1930 conference the IJN's disillusionment presaged the end of the treaty system, and the start of a renewed naval arms race with the United States—where Japan soon found itself on the losing end. As at Geneva, for Japan the debate revolved around the treaty cruiser, and the failure to placate the IJN on this issue at London had dire consequences. This type of quasi-battleship was by now seen as an integral part of the navy's decisive battle doctrine, and IJN planners saw as their overriding priority to maintain a 7:10 ratio in cruisers. Having already agreed to a lesser ratio in capital ships with the Anglo-Americans, the IJN saw it as imperative that its sacred 70 percent figure be preserved for smaller vessel types.³⁰

The Japanese delegation present at the conference's opening on 12 January 1930 was very different than the one which had attended Washington. Whereas Tomosaburo had been able to keep his naval subordinates in line—no mean feat considering it consisted of both Kanji and Suetsugu, the hard-line torchbearers—the delegation at London was riddled with dissent and lack of direction. In 1922 Tomosaburo had circumvented traditional Japanese collective decision-making, and forced through a plan of cooperation with the Anglo-Americans over the heads of his fuming subordinates, in what Asada has called “a triumph of rational decision

²⁹ Jordan, *Warships After Washington*, 288–89.

³⁰ Asada, *From Mahan to Pearl Harbor*, 123–24; Evans and Peattie, *Kaigun*, 234–35.

making over bureaucratic politics.”³¹ Conversely, at London a rift developed between the government and naval members of the Japanese delegation. The latter were thrown into fits when they learned that an agreement had been reached, without their knowledge, in which Japan would abide by a 60.2 percent ratio in what were now called heavy cruisers. This had been separately negotiated in a compromise between Ambassador to the United States Matsudaira Tsuneo and a Pennsylvania senator (the Reed-Matsudaira Compromise). What resulted in its wake was a bureaucratic revolt by the Naval General Staff—with Admiral Kanji as its chief—against the government and Navy Minister. The latter was the traditional voice of moderation in IJN policy, and with Kanji’s revolt followed the fatal devolution of Japanese Navy leadership.³²

After London, the interplay of the IJN’s factions came to a head. The moderates, known as the treaty faction, were mostly members of the administrative group, so called because its officers tended to be bureaucratic types who congregated in the Navy Ministry. The hardliners of the fleet faction, on the other hand, tended to belong to the command group, which unlike the administrative group was composed of sea-going officers and members of the Naval General Staff. It seems natural that the demarcation should have occurred in this way. The administrators tended to concern themselves more with geopolitical questions and were thus more inclined to take the long view, while the sea-warriors were fixated with waging battle and other operational concerns. Hence the latter’s absolute obsession with the 7:10 tonnage ratio which, in hindsight, appears absurd considering the more serious political issues at stake during this period. The situation was further complicated by the appearance in the mid-1930s of the American (Allied)

³¹ Asada, *From Mahan to Pearl Harbor*, 92.

³² Asada, *From Mahan to Pearl Harbor*, 134–40; Roger Dingman, “Navies at Bay,” *Naval History* 24, no. 6 (December 2010): 28–35.

<http://search.ebscohost.com.ezproxy1.apus.edu/login.aspx?direct=true&db=tsh&AN=55062416&site=ehost-live> (accessed 21 August 2015); Evans and Peattie, *Kaigun*, 237; Oi, “The Japanese Navy in 1941,” in *The Pacific War Papers*, 28–29.

and German (Axis) factions, whose officers professed alignment toward one or the other. Not surprisingly, the moderates tended to favor the former and the hardliners the latter. The animosity between the treaty and fleet factions became so bad that their spokesmen, Yonai and Suetsugu (Tomosaburo and Kanji's respective successors), apparently refused to talk to one another.³³

The IJN's disaffection with the 1930 London Treaty led to the failure of the 1935–1936 Second London Conference, and the end of Japan's participation in the treaty system. It also led to a renewed naval arms race with the United States, which, coupled with the beginning of Japan's open war with China in July 1937, went far to pave the way for a Pacific conflict. At Second London the Japanese chief delegate was Admiral Nagano Osami, a member of the fleet faction. Even if he had been inclined to parlay with the Anglo-American powers, which he was not, his hands were effectively tied by the government—browbeaten by the militarists—which instructed him to demand parity; nothing less would do. Though some small effort was made by both sides to explain the logic of their positions, their inflexibility doomed the talks to failure. On 15 January 1936, the Japanese delegation walked out of the Second London Conference, and the treaty era came to an end.³⁴

The supremely confident hardliners were certain Japan had little to fear from a naval arms race with the United States. The Navy Ministry, by now the mouthpiece of the hardliners and militant middle-echelon, went so far as to claim that “In the course of history there has never been a single country that was ruined by excessive expenditures on armaments.”³⁵ In its parochialism and ignorance of the world outside Asia, the IJN fatally misjudged the United

³³ Asada, *From Mahan to Pearl Harbor*, 164–69; IJN Captain Hara Tameichi believed Yonai to be “one of the greatest leaders the Imperial Navy ever produced”; Hara Tameichi, *Japanese Destroyer Captain* (Annapolis: Naval Institute Press, 1967), 14.

³⁴ Asada, *From Mahan to Pearl Harbor*, 203–04.

³⁵ The Publicity Bureau of the Japanese Navy Ministry (1934) in Asada, *From Mahan to Pearl Harbor*, 205.

States and believed there would not be an arms race. As if to further delude themselves, the Naval General Staff concluded that it was actually more economical to build freely than to maintain a treaty navy. With gigantic battleships like the 65,000-ton *Yamato* (whose keel was laid at Kure in November 1937), the navy's logic went, its ships would be more cost-effective through their greatly improved survivability, as well as ability to deal annihilating blows to an enemy's fleet. Fewer such monsters would need to be constructed, in comparison with many more heavy cruisers. The questionable logic of this argument aside, the heavy cruiser continued to be a vital component of the IJN as war clouds loomed in 1941.³⁶

The IJN's overarching doctrinal tenet throughout the interbellum was the *kantai kessen* (the single decisive fleet engagement).³⁷ Decisive naval battles in history are few and far between, and it is noteworthy that the only such clash to occur during the pre-dreadnought era was the Battle of Tsushima in 1905. Prior to the Russo-Japanese War, the only other decisive, large-scale fleet engagement in the age of steam was the 1866 Battle of Lissa in the Adriatic, in which Austria defeated Italy. The 1916 Battle of Jutland, the only major battleship action in the dreadnought era, though spectacular, was not decisive in any way. Instead, it was the submarine which left the greatest mark on naval warfare in World War I. Nevertheless, throughout the interbellum the IJN clung dogmatically to the principle that its wars at sea would be decided—as it had against Russia—with a decisive fleet battle. The idea that Tsushima was an aberration in naval history, rather than the norm, did not occur to most IJN planners.³⁸

Up to a point, the Japanese can be forgiven for placing such an inordinately high value on decisive battles with big-gun warships. When looking beyond Japan, it becomes apparent that the

³⁶ Asada, *From Mahan to Pearl Harbor*, 205–06; Janusz Skulski, *Anatomy of the Ship: The Battleship Yamato* (Annapolis: Naval Institute Press, 1989), 10.

³⁷ Evans and Peattie, *Kaigun*, 141.

³⁸ Ireland, *Jane's Battleships of the 20th Century*, 12.

idea that wars at sea could—and would—be decided by battleship fleet actions was held by all major navies of the period. A notable exception was the French Navy's late nineteenth-century *Jeune École* (Young School), whose theorists held that modern technological breakthroughs in torpedo and mine warfare rendered traditional battle fleets obsolete.³⁹ While its prescience was laudable—anticipating as it did the impact of flotilla craft and commerce raiding in wars to come—the technology available at the time made it a questionable alternative. And even so, a convincing argument can be made that the French primarily sought to make a virtue out of necessity, as their principal naval rival during this period, the Royal Navy, had a superior battle fleet. The world's early twentieth-century naval theorists wholeheartedly subscribed to the decisive fleet engagement—and none more so than the doctrine's chief acolyte, Alfred Thayer Mahan.

In 1890 Mahan published his famous treatise *The Influence of Sea Power Upon History, 1660–1783*. In essence a history book with lessons for aspiring maritime nations, Mahan illustrated how sea power, especially in the form of concentrated fleets and decisive battles, fundamentally influenced the fates of England, France, and the Netherlands during the ceaseless dynastic struggles of the seventeenth and eighteenth centuries. Much has been made of the IJN's fixation on Mahan's writings, and while this seems valid, it would be mistaken to explain Japanese naval doctrinal development solely as a product of his theories. The Japanese adapted rather than adopted Mahan's teachings to their own navy. Two other, highly influential theorists were Akiyama Saneyuki and Sato Tetsutaro, both instructors at the Naval Staff College in the years after the Russo-Japanese War. Both had spent formative years abroad; Akiyama had firsthand experience from the U.S. side in the Spanish-American War, while Sato had studied in the United States and Great Britain. Their influence—in conjunction with Mahan—was such that

³⁹ Ibid., 14.

Akiyama is also known as the father of Japanese naval strategy, and Sato as Japan's Mahan.⁴⁰

These theorists mixed Eastern and Western military philosophy to put an indigenous spin on Mahan's teachings; one tailored specifically to Japan's geographic position. This is an important consideration, as Japan's attempts to delineate how a weaker power might triumph over a stronger one had a tremendous influence on the kinds of weapon systems that were developed for its navy. The IJN's large, powerful cruisers were a product of this philosophy.⁴¹

Sato's *On the History of Imperial Defense*, published in 1908, became the IJN's doctrinal manual. This was augmented by a 1913 pamphlet (*Historical Study for the Defense Problems of the Japanese Empire*) in which Sato outlined the 7:10 ratio rule that became such a sacred tenet of the IJN hardliners. Mixing Mahan's history lessons with more recent, practical Japanese experience from the Russo-Japanese War, Sato concluded that Tsushima had vindicated the theory of the single decisive fleet engagement as a war-winner. *On the History of Imperial Defense* thus nicely complemented Mahan's *The Influence of Sea Power Upon History*. Meanwhile, Akiyama's *Essential Instructions on Naval Battles* became the navy's tactical bible. It was improved upon over the years, but in essence took its lessons from the Russo-Japanese war. Akiyama thus laid the groundwork for the IJN's focus on daytime long-range gunnery, and night combat with torpedoes and gunfire.⁴²

In their adaptation of Mahan's theories to suit Japan's situation, Akiyama and Sato argued for an advance into Southeast Asia; there lay the resources needed to bring the Empire to greatness. The seeds for a southern advance were thus sown early. It did not become an acute reality for the IJN, however, until the 1930s when its ships switched from coal- to oil-fired

⁴⁰ Toshi and Holmes, "Japanese Maritime Thought: If not Mahan, Who?" 27.

⁴¹ Hirama, "Japanese Naval Preparations for World War II," 64; Oi, "The Japanese Navy in 1941," in *The Pacific War Papers*, 9–10; Toshi and Holmes, "Japanese Maritime Thought: If not Mahan, Who?" 27–28.

⁴² Oi, "The Japanese Navy in 1941," in *The Pacific War Papers*, 9–10; Evans and Peattie, *Kaigun*, 137–41, 144–46; Toshi and Holmes, "Japanese Maritime Thought: If not Mahan, Who?" 28–31.

machinery. At that point, the need to secure the oil of the East Indies made the southern advance a serious consideration; the July 1941 U.S. oil embargo then made it paramount. In any case, striking south implied conflict with the European imperial powers, and by extension, the United States. Interbellum IJN planners thus formulated the strategy for luring the USN into the Western Pacific, where the two fleets would refight the Battle of Tsushima. Sato's book also had propaganda value for the navy in its budgetary war with the army. Its argument for an advance into the South Seas was diametrically opposed to the latter's Asian continental strategy. Naturally, a national doctrine predicated on a maritime strategy, and a strong battle fleet, implied a majority share of materials allocations as well as prestige.⁴³

That the Japanese Navy's fixation on big fleets, big ships, and big guns was flawed is, in hindsight, patently obvious. In its perceived need to outshine the army, and shoehorn the USN—a qualitatively equal and quantitatively superior force—into an enemy role, the IJN and its theorists developed a doctrine whose historical lessons were highly selective. Tsushima was, of course, exhaustively studied, as were the fleet actions of World War I: Coronel, the Falklands, and Jutland. Largely ignored, however, was the submarine war, including Germany's near-strangulation of Great Britain by commerce warfare in 1917. This was despite the fact that the IJN had conducted convoy escort in the Mediterranean during the war, to assist its French and British allies. Similarly neglected were the underlying reasons for why in 1904–1905 Japan was able to prosecute a limited war against Russia, a much larger power. Expecting the United States to behave like Tsarist Russia—which lacked allies and resolve, and for which Asia was a sideshow—and concede a limited war in a total war age, represented a fatal miscalculation by Japanese strategists. The IJN's planners chose to ignore the historical lessons that did not fit into

⁴³ Evans and Peattie, *Kaigun*, 514–15; Toshi and Holmes, “Japanese Maritime Thought: If not Mahan, Who?” 28–31.

their preconceived notions for a quick and decisive naval war; their focus was on myopic operational and tactical concerns. The navy was fixated on waging battle rather than war.⁴⁴

The IJN's plans for the single decisive fleet engagement were predicated on first and foremost luring the USN across the Pacific for a showdown near Japanese home waters. However, as the operational radius of ships increased—and submarine and aviation technology matured—the location of the decisive battle was steadily shifted eastwards. While in the late 1920s it was expected to take place between the Ryukyu Islands and the Bonin Islands, by the following decade the battle had been moved to a line between the Bonins and the Mariana Islands. By 1940, the location had been moved all the way to the Marshall Islands, halfway to Hawaii. Of significance to the IJN's operations in the Pacific War, this gradual movement eastwards did not come with a commensurate focus on logistics, or a recognition of the need for a large and well-equipped fleet train and well-developed bases. The USN, conversely, accepted that a Pacific War would entail the movement of its fleets thousands of miles, and prepared accordingly. The American 1943–1945 Central Pacific Campaign would not have been possible without a huge armada of supply ships.⁴⁵

Japan's conviction that the USN would steam into the Western Pacific for a fleet battle was a fundamentally correct appraisal of American intentions in the event of a Pacific war. During the 1920s, the Japanese naval intelligence service obtained documents outlining American naval strategy, and the IJN was thus well-informed of the USN's War Plan Orange. However, Japanese planners gave little consideration for the possibility that the Americans might

⁴⁴ Chihaya, "An Intimate Look at the Japanese Navy," in *The Pearl Harbor Papers*, 314; Evans and Peattie, *Kaigun*, 515–16; Koda, "The Russo-Japanese War: Primary Causes of Japanese Success," 37–42; Oi, "The Japanese Navy in 1941," in *The Pacific War Papers*, 13–15; Yokoi, "Thoughts on Japan's Naval Defeat," in *The Japanese Navy in World War II*, 507.

⁴⁵ Chihaya Masataka, "Importance of the Japanese Naval Bases Overseas," in *The Pacific War Papers*, 63–66; Evans and Peattie, *Kaigun*, 289–92; Hirama, "Japanese Naval Preparations for World War II," 64–66; Ozawa Jisaburo, "Development of the Japanese Navy's Operational Concept against America," in *The Pacific War Papers*, 73.

not follow the script verbatim. Kanji and his naval staff hardliners assumed that after the loss of the Philippines to Japan early in the war, the USN Pacific Fleet would immediately sally westwards and oblige the Japanese to a quick and decisive showdown. While eminently convenient for Japan, this was in fact just one variation of War Plan Orange. The other was a slower, more methodical campaign in which the Americans would island-hop their way toward the Western Pacific, taking full advantage of their industrial superiority to build up overwhelming forces. While the “thrusters” held initial sway over USN doctrine, during the 1920s War Plan Orange came around to favor the more cautious step-by-step approach.⁴⁶ In any case, until Japan’s 7 December 1941 raid on Pearl Harbor, it was accepted by both navies that a Pacific war would be decided by a clash of battleship and cruiser fleets. Having identified its counterpart as the most likely opponent, the IJN and USN came to resemble one another.⁴⁷

The big question for the IJN was how to prevail against the numerically superior American fleet. Besides a relentless focus on qualitative superiority ship for ship, IJN planners believed that a key to Japanese success lay in the likelihood that the USN would be drained from its voyage across the Pacific. With the ascendancy of cruisers and flotilla craft during the treaty era, Japan’s original interception strategy, based around capital ships, morphed with an attrition strategy which became an interbellum cornerstone of *kantai kessen*. Known as *yugeki zengen sakusen* (interception-attrition operations), it stipulated that Japanese cruisers, destroyers, and submarines would attrite the American fleet as it steamed westward to seek the decisive fleet engagement.⁴⁸ Submarines would first scout and commence attacks on the U.S. fleet as soon as

⁴⁶ Asada, *From Mahan to Pearl Harbor*, 108.

⁴⁷ Asada, *From Mahan to Pearl Harbor*, 108–09; Thomas G. Mahnken, “Asymmetric Warfare at Sea: The Naval Battles off Guadalcanal, 1942–1943,” *Naval War College Review* 62, no. 1 (Winter 2011): 97; Oi, “The Japanese Navy in 1941,” in *The Pacific War Papers*, 12; Ozawa, “Development of the Japanese Navy’s Operational Concept against America,” in *The Pacific War Papers*, 72.

⁴⁸ Hiram, “Japanese Naval Preparations for World War II,” 63.

possible. Land-based naval aircraft from the Mariana, Marshall, and Caroline Islands would next join in the attack. Finally, and as a prelude to the decisive engagement, groups of fast battleships, cruisers and destroyers would conduct night attacks using torpedoes and gunfire. This was expected to do heavy damage to the enemy fleet and throw it into confusion. The night combat groups would join the main battle fleet in the climactic daylight engagement, which would be decided by long-range gunnery. By the time the main Japanese and American battle fleets met, the two sides would thus be numerically equalized. This would enable the Japanese to send the remnants of the USN Pacific Fleet to the bottom of the ocean, in a gigantic super-Tsushima.⁴⁹

Heavy cruisers were a vital component of the interception-attrition operation, and their success in the Pacific War was largely the result of the tactics utilized to originally be part of this strategy. Their basic operational formation was the *sentai* (cruiser division), composed by November 1941 of two to four heavy cruisers. Largely assigned to the IJN's Second Fleet (also known as the Scouting Force or Heavy Cruiser Force), the *sentai* would be utilized tactically as part of a *yasengun* (night combat group), four of which were to be formed in the event of war.⁵⁰ By the mid-1930s, the Japanese had made several notable advances in night-fighting technology (covered in more detail in Chapter II), including high-quality optics, parachute-suspended star shells, and long-range torpedoes—above all the wakeless Type 93. This enabled the *yasengun* to grow from a torpedo boat- and destroyer-centric force in the 1920s to one incorporating the four *Kongo*-class fast battleships, heavy cruisers, light cruisers (as destroyer flotilla leaders), and heavy destroyers.⁵¹ The *yasengun* were compact and efficient units, steaming in several small

⁴⁹ Chihaya Masataka, "Some Features Concerning Changes in the Japanese Fleet Organization during the War," in *The Pacific War Papers*, 284–85; Hirama, "Japanese Naval Preparations for World War II," 63–66; Mahnken, "Asymmetric Warfare at Sea," 99–100.

⁵⁰ Evans and Peattie, *Kaigun*, 275–76; Lacroix and Wells, *Japanese Cruisers of the Pacific War*, 294; Ozawa Jisaburo, "Fleet Organization," in *The Pacific War Papers*, 83–84.

⁵¹ The *Kongo*-class ships were originally built as battlecruisers (1911–1915), but were reconstructed into fast battleships in the 1930s; Jentschura, Jung, and Mickel, *Warships of the Imperial Japanese Navy*, 31–35.

parallel columns, often with a destroyer vanguard to prevent ambush. The ships would resort to gunfire only after a full barrage of long-range torpedoes had been launched—undetected—at the enemy column and thrown it into disarray. The ascendancy of the heavy cruiser in the treaty era increased the IJN’s reliance on night combat not just as a prelude, but as an integral part of the decisive fleet engagement. IJN planners began adding cruisers into the mix after 1922, based in part on lessons from the Battle of Jutland (in which the Germans had given the British the slip at night, and thus prevented another Trafalgar or Tsushima). The rigidity of its doctrine notwithstanding, by the late 1930s the IJN was undoubtedly the most proficient night-fighting navy in the world.⁵²

Night combat and rapid strikes were an IJN tradition which predated the Pacific War. During both the Sino-Japanese and Russo-Japanese Wars the navy had conducted night attacks with light forces. The most celebrated was the 9 February 1904 destroyer torpedo attack on the Russian fleet base at Port Arthur, which was in many ways a spiritual predecessor to the *yasengun* concept, as well as the Pearl Harbor raid.⁵³ The technological limitations at the time made these attacks relatively ineffective; by the 1930s, however, this was no longer the case. It was logical for a navy which perpetually saw itself as an underdog to look for an effective force-equalizer, and Japanese strategists reasoned that at night an opponent’s numerical and technological advantages could be negated. As will be shown, this view was tactically vindicated in 1941–1942. Although American naval intelligence was aware of the Japanese advances in this

⁵² Evans and Peattie, *Kaigun*, 273–77; Mahnken, “Asymmetric Warfare at Sea,” 101–02; Ozawa, “Development of the Japanese Navy’s Operational Concept against America,” *In The Pacific War Papers*, 74.

⁵³ Admiral Yamamoto, the architect of the Pearl Harbor raid, reputedly told Admiral Ozawa in February 1941 that “the most impressive lesson he learned when he had studied the Russo-Japanese War was the fact that the Japanese Navy launched the night assault against enemy ships in Port Arthur at the very beginning of the war.”; Ozawa Jisaburo, “Outline Development of Tactics and Organization of the Japanese Carrier Air Force,” in *The Pacific War Papers*, 81.

field, the USN nonetheless badly underestimated IJN night-fighting proficiency at the start of the Pacific War.⁵⁴

It is important to note that Japanese heavy cruisers were intended to be more than just night-fighting specialists. While much of the IJN's prewar tactical training focused on effective night combat techniques, its cruisers served several other important functions as well. As miniature battleships, they were intended to augment the battle line in a daylight engagement with their 20-cm guns. Obsessed with the principle of outranging and outgunning the USN, the IJN conducted extensive experiments before the war, even going so far as to pioneer a novel form of underwater shot.⁵⁵ In tests carried out on the hulk of the battleship *Tosa* (the construction of which had been halted by the Washington Treaty), Japanese warships fired their rounds deliberately short of the target; the idea was that the trajectory would cause the shell to strike the target below the waterline, and below the armored belt, opening the hull to the sea.⁵⁶ While an interesting exercise in physics, this kind of shot only appears to have worked once in action—at night, and largely accidentally—at the 11–12 October 1942 Sea Battle off Savo Island (Battle of Cape Esperance).⁵⁷ Though unquestionably accomplished night-fighters, Japanese long-ranged, daytime gunnery in actual combat conditions was, like that of other World War II navies, fairly lackluster. This probably had more to do with the unreasonable expectations of prewar tacticians than the competence of vessel crews. In any event, long-ranged cruiser gunnery duels were a rarity in the Pacific War. In the period under study, Japanese heavy cruisers only engaged their

⁵⁴ Evans and Peattie, *Kaigun*, 95–99; Koda, “The Russo-Japanese War: Primary Causes of Japanese Success,” 27–29; Mahnken, “Asymmetric Warfare at Sea,” 101–02; Ozawa, “Development of the Japanese Navy’s Operational Concept against America,” in *The Pacific War Papers*, 74.

⁵⁵ The *Yamato*-class battleships, with their 18.1-in. (46-cm) main guns, were the ultimate embodiment of the Japanese fixation on outranging and outgunning the USN; Chihaya Masataka, “Some Stories Concerning the Construction of the *Yamato* Class Battleships,” in *The Pacific War Papers*, 97–98; Skulski, *The Battleship Yamato*, 17–18.

⁵⁶ *Tosa* was the sister ship of *Kaga*, which had been spared a similar fate in the wake of the treaty by conversion to an aircraft carrier; Jentschura, Jung, and Mickel, *Warships of the Imperial Japanese Navy*, 35.

⁵⁷ Evans and Peattie, *Kaigun*, 263–66; Lacroix and Wells, *Japanese Cruisers of the Pacific War*, 308–10.

Allied counterparts in this kind of long-range duel once, during the first phase of the 27 February–1 March 1942 Sea Battle off Surabaya (Battle of the Java Sea).⁵⁸

In the IJN, the use of heavy cruisers as fleet scouts was greatly emphasized. All Japanese heavy cruisers, like their counterparts in other navies, carried floatplanes. These were intended to operate in a reconnaissance role, in conjunction with those launched from battleships as well as scout bombers from aircraft carriers. The IJN ultimately preferred to leave scouting to the floatplanes, while the carrier aircraft focused on the attack mission. Indeed, the Japanese placed such value on fleet scouting with cruiser floatplanes that the last heavy cruisers built for the IJN before the war, the *Tone* class, were designed primarily with this mission in mind. The two ships of the class, *Tone* and *Chikuma*, spent the majority of the Pacific War's first year accompanying the carrier fleet, and as planned were to carry an unprecedented six to eight floatplanes each (five were ultimately embarked). The IJN's dependence on these modestly-ranged aircraft as the fleet's primary scouts would, in fact, have fateful consequences, most notably at the Battle of Midway on 3–7 June 1942.⁵⁹

While it is easy in hindsight to criticize the *kantai kessen* doctrine for its rigidity, it is important to view its development in the context of Japan's position and material deficiencies. As already stated, the IJN's focus on a strong surface fleet for waging decisive engagements was not in itself unique, and was in keeping with the prevailing attitudes of world naval strategists at the time. For Japan, this attitude was heightened since, unlike other interbellum navies, it had actually fought a war which had been decided by a decisive fleet engagement. In the words of

⁵⁸ Chihaya Masataka, "Account of the Battle of the Java Sea," in *The Pacific War Papers*, 274; the 27 March 1943 Sea Battle off Attu Island (Battle of Komandorski Islands) falls outside this study's scope, but further illustrates the inconclusive nature of long-range gunnery duels in World War II; Lacroix and Wells, *Japanese Cruisers of the Pacific War*, 298, 315–16; Ugaki Matome, *Fading Victory: The Diary of Admiral Matome Ugaki 1941–1945*, eds. Donald M. Goldstein and Katherine V. Dillon, trans. Masataka Chihaya (Annapolis: Naval Institute Press, 2008), 106.

⁵⁹ Lacroix and Wells, *Japanese Cruisers of the Pacific War*, 822–24; Jonathan B. Parshall and Anthony P. Tully, *Shattered Sword: The Untold Story of the Battle of Midway* (Dulles: Potomac Books, 2005), 108.

authors Toshi Yoshihara and James Holmes, “Japanese strategists focused primarily on tactics and operations rather than the more rarified dimensions of naval warfare, in large part because, in contrast to their American counterparts, they learned about naval strategy more from combat experience than from abstract seapower theory.”⁶⁰

The interbellum USN was in many ways little different from its IJN counterpart. Carrier airpower was only seen as the arbiter of naval warfare by default in the wake of the Pearl Harbor raid, after the IJN had crippled the Pacific Fleet battle line with which the USN had expected to bring Japan to its knees. In its own perverse way, the Japanese raid may have done the USN a favor by forcing it to shed its battleship-centric strategy in an era of naval airpower. As will be further discussed, the IJN only came around to a similar view after its disastrous defeat at Midway. Pearl Harbor was the shock that forced the USN to view the carrier as its primary offensive weapon, while the Japanese still clung to the theory that carriers existed to support battleships well into 1942.⁶¹

The IJN, while imbued with a young and aggressive tradition, was the product of a resource-poor empire. As such, it did not have the luxury to pursue a number of different doctrines or fleet compositions. In a manner, Japan’s material limitations forced it to relentlessly streamline its navy to conform to established doctrine. The Japanese could either have afforded a well-balanced navy replete with smaller, less glamorous vessels for commerce protection, or a highly specialized force with the best big-gun warships that resources and ingenuity could provide, but not both.⁶² The IJN, born in the crucible of decisive battle, unhesitatingly opted for

⁶⁰ Toshi and Holmes, “Japanese Maritime Thought: If not Mahan, Who?” 31.

⁶¹ Jonathan B. Parshall, “Ignoring the Lessons of Defeat,” *Naval History* 21, no. 3 (June 2007): 32–38. <http://proquest.umi.com.ezproxy2.apus.edu/pqdweb?did=1267544491&sid=1&Fmt=3&clientId=62546&RQT=309&VName=PQD> (accessed 24 August 2015); Yokoi, “Thoughts on Japan’s Naval Defeat,” in *The Japanese Navy in World War II*, 513.

⁶² Effective commerce protection implied the possession of small antisubmarine vessels like armed trawlers, corvettes, sloops, and destroyer escorts, as well as adequate antisubmarine detection devices and tactics—all of

the latter. Additionally, the treaty system limited the navy in terms of tonnage with the Anglo-American power bloc, and this further confined Japan's focus to a fleet tailored for naval blitzkrieg.⁶³

Japan's fateful neglect of commerce warfare needs to be understood in the context of how in the interbellum it viewed a future war with America. Since everything was staked on prosecuting a short war, the need for commerce raiding and commerce protection was seen as secondary, if not largely unnecessary. After all, if Japan could smash the USN Pacific Fleet at the outset, as its fleet was designed specifically to do, and force a negotiated peace in her favor within the first year, the effects of commerce warfare would not be felt in time to make any difference to the war's outcome. The IJN saw the protection of its sealanes in terms of the single decisive fleet engagement: by defeating the U.S. battle fleet, the IJN would prevent the USN from blockading Japan and destroying its commerce. A swift decision in a climactic battle would render any lengthy commerce warfare campaign moot. This fit better into Japanese doctrinal preconceptions than did an unrestricted submarine campaign against merchant shipping by either side, which might take years to have any effect. Commerce warfare would have been an admission of the inevitability of a long, drawn out war. Decisive battle, on the other hand, offered to IJN strategists the chance to end the war quickly on the 1904–1905 model.⁶⁴

Another off-putting factor for Japan, in terms of commerce raiding against American shipping, was the fact that the United States had two coasts, one of which was entirely off limits to Japanese cruisers or submarines. Japan could never, in what it considered to be any reasonable

which the IJN, like the USN at the start of World War II, woefully lacked; Evans and Peattie, *Kaigun*, 425–26; Oi, "The Japanese Navy in 1941," in *The Pacific War Papers*, 25.

⁶³ Yokoi, "Thoughts on Japan's Naval Defeat," in *The Japanese Navy in World War II*, 507–08.

⁶⁴ Asada, *From Mahan to Pearl Harbor*, 54–55; this attitude dovetailed nicely with Mahan's disdain for commerce raiding as a primary strategy; Alfred Thayer Mahan, *The Influence of Sea Power Upon History, 1660–1783* (Project Gutenberg, 2004), 131, 141, 206, 253, 325. <http://www.gutenberg.org/ebooks/13529> (accessed 25 August 2015).

amount of time, have expected to bring America to its knees by destroying its merchant shipping. Additionally, The United States had nearly all the resources it needed within its own borders, having achieved the autarky that Japan so envied, and tried to emulate, by expansion onto the Asian continent and elsewhere. This does not excuse Japan for pursuing such an inflexible doctrine, or for the IJN failing to see the opportunity to conduct commerce raiding on a more modest scale in the Pacific, but it does partly explain the logic behind the decision to do so. For IJN strategists, *kantai kessen*, big fleets, big ships, and big guns had an established historical precedent, and made sense. Japan's powerful heavy cruiser arm was one of the most visible symbols of this mindset. Even the Pearl Harbor raid needs to be understood in this light. A surprise attack on the enemy in port, at the start of hostilities, was an IJN tradition that went back to the Russo-Japanese War. Such attacks, while they might *hope* to win the war outright, must be seen more realistically from a doctrinal standpoint as a prelude to the *kantai kessen*, rather than a replacement for it.⁶⁵

⁶⁵ Asada states that Yamamoto was of the opinion that, with the advent of airpower, the decisive fleet encounter had been rendered invalid; yet the latter very much saw the operational defeat of the USN in the Pacific, after the incomplete victory at Pearl Harbor, in terms of a decisive battle—hence the Midway operation; Asada, *From Mahan to Pearl Harbor*, 278.

CHAPTER II

JAPANESE HEAVY CRUISER DEVELOPMENT, 1922–1939

Doctrinally, the Japanese treaty cruiser's antecedent was the armored cruiser of the late nineteenth and early twentieth century. During the Russo-Japanese War, the IJN possessed eight armored cruisers, and, as discussed, these ships proved valuable adjuncts to the battle fleet. At the beginning of the twentieth century, Japan did not have shipyards capable of producing large, modern warships, so its armored cruisers were all built in Europe. Despite being constructed in four different countries, the ships were quite uniform in performance, protection, and armament. This was in keeping with the IJN's policy of fielding homogenous divisions and fleets. Japan's eight armored cruisers were built in the period 1896–1904, and were some of the most advanced of their type upon completion—echoing another IJN trend which manifested itself again in the treaty era. Four of the ships, *Asama*, *Tokiwa*, *Izumo*, and *Iwate*, were built in Great Britain, while *Azuma* was built in France, *Yakumo* in Germany, and the last two to be completed, *Kasuga* and *Nisshin*—of the renowned and widely exported *Garibaldi* type—were built in Italy.⁶⁶

Developmentally, however, the treaty cruiser owed its lineage more to the armored cruiser's lighter consort, the protected cruiser, which in turn was the basis for the World War I-era scout cruiser; the treaty cruiser's immediate predecessor. Protected cruisers served valuable scouting roles during the Russo-Japanese War, with Japan possessing a number of them, and before the advent of submarines and aircraft were the eyes of the battle fleet. The scout cruiser, as the name suggests, was a continuation of the protected cruiser's general design features and mission profile. In Japan, the treaty cruisers laid down after the 1921–1922 Washington

⁶⁶ Jentschura, Jung, and Mickel, *Warships of the Imperial Japanese Navy*, 72–76.

Conference were based on the scout cruisers drawn up after World War I, just before the start of the treaty era.⁶⁷

By 1921, plans were well advanced in Japan for just such a new type of scout cruiser. This, the 7,500-ton *Furutaka* class, was in turn based on the 3,560-ton experimental cruiser *Yubari*, designed by the influential Constructor Captain Hiraga Yuzuru, father of Japan's treaty cruiser force.⁶⁸ *Yubari*, a one-of-a-kind vessel, introduced a number of innovations which were repeated in later Japanese cruiser designs, including trunked funnels with armored uptakes, locating the officer's quarters in the forward part of the ship, the use of oil-fired machinery only (as opposed to coal and oil combined), the adoption of a characteristic stem (mimicking a gently curved "S"), and perhaps most notably, weight-saving measures through the use of deck and side armor as an integral part of the vessel's longitudinal strength.⁶⁹ *Yubari* carried an offensive punch belying her small size, and she was more than capable of matching contemporary vessels several thousand tons heavier. Originally planned under the navy's 1917 building program, *Yubari* was in fact not completed until 1923, but nonetheless her influence on treaty cruiser design was significant. This included a dubious legacy of exceeding design displacement, but in *Yubari's* case the excessive weight did not affect seaworthiness, since stability remained good. However, weight and stability issues would come back to plague the IJN's treaty cruisers.⁷⁰

Having been on the drawing board for some time before the Washington Conference, the *Furutaka*-class scout cruisers, built in 1922–1926, set the standard for Japanese treaty cruiser design. The two ships of the class, *Furutaka* and *Kako*, had a normal design displacement of

⁶⁷ Ibid., 95–104.

⁶⁸ Hiraga was promoted to rear admiral in 1922, and vice admiral in 1926; Evans and Peattie, *Kaigun*, 522–23; Lacroix and Wells, *Japanese Cruisers of the Pacific War*, 52, 717.

⁶⁹ Trunked funnels are two or more funnels that are joined together; a ship's stem is the forwardmost part of the bow.

⁷⁰ Evans and Peattie, *Kaigun*, 224–25; Jentschura, Jung, and Mickel, *Warships of the Imperial Japanese Navy*, 110; Lacroix and Wells, *Japanese Cruisers of the Pacific War*, 41–48, 798–800; Oi, "The Japanese Navy in 1941," in *The Pacific War Papers*, 24–25.

7,500 tons (although, like in *Yubari*, this figure was exceeded on completion), and were armed with six 20-cm guns, arranged singly in unarmored gun-houses (a kind of proto-turret).⁷¹ The two ships were later modernized to keep them current with their treaty cruiser successors, and the gun-houses were in 1936–1939 replaced by three fully armored turrets housing two guns apiece.⁷² During this modernization, the trial displacement of the ships also climbed to over 10,500 tonnes.⁷³ All told, the *Furutaka* class, like the later Japanese treaty cruisers, compared favorably with the contemporaries of other navies, especially in offensive firepower; as completed, the ships, besides their gun armament, also carried 12 fixed 24-in. (61-cm) caliber torpedo tubes, arrayed in pairs, with three pairs on each side, port and starboard. During their modernization these were replaced with two shielded, trainable quadruple-tube mounts for the lethal Type 93 torpedo.⁷⁴

As these ships sacrificed armor for speed and firepower—they were capable of 33–35 knots—the *Furutakas* foreshadowed the characteristics of the first generation of treaty cruisers. This was indicative of the dilemma faced by the designers, inherent in keeping to an arbitrary, treaty-stipulated tonnage limit. As it was physically impossible to build a very fast, very well-protected, and very well-armed vessel within 10,000-ton standard displacement, the designers were forced to prioritize some characteristics over others. The Japanese, in their quest for qualitative superiority at all cost, tried very hard to be the exception to this ironbound rule. While

⁷¹ Displacement was measured in “Washington standard,” “normal,” “trial,” “full load,” and “light”—as an example, the *Kako*’s respective displacements on completion were 7,950 tons, 8,530 tons, 9,502 tonnes, 10,252 tonnes, and 7,601 tonnes (see also note 73); Lacroix and Wells, *Japanese Cruisers of the Pacific War*, 801.

⁷² Twin 20-cm turrets were a notable characteristic of IJN heavy cruisers, as well as the cruisers of Britain, France, and Italy; the USN favored the triple turret, despite the problems inherent in firing three closely spaced guns at the same time; Jordan, *Warships After Washington*, 113–14.

⁷³ Japan officially adopted the metric system in 1920–1921, although it had been in use for ordinance measurements as early as 1917; in the IJN, trial displacement was therefore measured in metric tonnes, as opposed to normal and Washington standard displacement, which was measured in imperial long tons to conform to treaty requirements; Lacroix and Wells, *Japanese Cruisers of the Pacific War*, 3, 725, 800–04.

⁷⁴ Jentschura, Jung, and Mickel, *Warships of the Imperial Japanese Navy*, 79–80; Lacroix and Wells, *Japanese Cruisers of the Pacific War*, 800–04.

this resulted in some of the world's most powerful treaty cruisers, it also came at the price of excessive weight, which in turn adversely affected stability and seaworthiness. This trait was not as evident in the smaller *Furutaka*-class ships when first built—since, being pre-treaty cruisers, they were well under the tonnage cap—but became a serious issue in subsequent generations of Japanese vessels.⁷⁵

Generally speaking, interbellum treaty cruiser development in the signatory navies went through three phases. The first phase was characterized by an almost exclusive focus on speed and armament (and in some cases, range) at the expense of protection. As a result, many of the first-generation treaty designs were very lightly armored. The second phase saw a slightly increased emphasis on protection—though still not at any considerable sacrifice in speed or armament. The last phase, however, largely reversed earlier trends by prioritizing armor protection at the cost of armament and several knots in speed. Developmentally, this was further aided by the abrogation of the treaty system in 1936, which enabled designers to create well-balanced warships freed from arbitrary tonnage limits—exemplified in Japan's case by the post-treaty-era *Tone* class, its last heavy cruisers built before the start of the Pacific War.⁷⁶

The *Furutaka*-class scouts continued the principles originally laid down by Hiraga in *Yubari*, and also introduced features which were repeated in the treaty cruisers. Both designs integrated armor into the hull's longitudinal structure in an effort to save weight; in the *Furutakas*, Hiraga took this one step further by designing a hull with an undulating sheer line, where the vessel's freeboard decreased as it moved aft (where a higher freeboard was less necessary).⁷⁷ This made for more complicated construction, but was an ingenious measure since

⁷⁵ Jordan, *Warships After Washington*, 35–37, 113; Lacroix and Wells, *Japanese Cruisers of the Pacific War*, 800–04.

⁷⁶ Jordan, *Warships After Washington*, 152.

⁷⁷ Sheer refers to the curvature of the main deck, while freeboard is the distance from the waterline to the main deck.

it saved weight while making the longitudinal members continuous, and therefore stronger. This peculiar, wavy hull form characterized subsequent designs, and together with a heavy gun and torpedo armament, trunked and raked funnels, and large superstructures made Japanese heavy cruisers some of the most visually striking and recognizable warships of World War II.⁷⁸

The *Furutaka* and *Kako* were closely followed on the slipways by their two near-sisters *Aoba* and *Kinugasa*, built in 1924–1927. While basically considered part of the *Furutaka* class, the latter two incorporated design improvements during construction, and thus, when launched, displayed some differences from their forbears; the most obvious being the fitting of twin turrets (as opposed to gun-houses) from the outset. Like the *Furutakas* before them, the *Aoba*-class ships were taken in hand for modernization in 1938–1940. These four ships, while the oldest and least well-armed of Japan’s World War II heavy cruisers—carrying only six guns in three turrets in comparison with their successors’ ten guns in five turrets—were largely responsible for the USN’s humiliating defeat at the 9 August 1942 First Battle of the Solomon Sea (Battle of Savo Island).⁷⁹

In the wake of the Washington Treaty, the IJN placed tremendous emphasis on qualitative superiority and night-fighting proficiency. As the Japanese saw it, the treaty cruiser was the key to offset the imbalance in capital ships with the United States and Great Britain, while the perfection of night combat technology and tactics would further neutralize the enemy’s advantages—focused as he was on waging battle in daylight. In the debate over what characteristics to prioritize in an arbitrarily fixed displacement, Japanese designers tended to come down on the side of armament and speed. To satisfy the clamoring of the Naval General

⁷⁸ Lacroix and Wells, *Japanese Cruisers of the Pacific War*, 55–56.

⁷⁹ Paul S. Dull, *A Battle History of the Imperial Japanese Navy (1941–1945)* (Annapolis: Naval Institute Press, 1978), 187–94; Jentschura, Jung, and Mickel, *Warships of the Imperial Japanese Navy*, 80–81; Lacroix and Wells, *Japanese Cruisers of the Pacific War*, 61–63, 804–07.

Staff, Japanese treaty cruisers bristled with gun turrets and heavy torpedo armament. Operational radius and armored protection was not as highly emphasized, although, thanks to the clever design of Constructor Hiraga, the most was made out of a limited amount of armor. In the prioritization of vessel characteristics, the IJN's designers held an advantage over their American counterparts, the latter which had to stress operational radius in their treaty cruiser designs; this to enable them to fight their way across the Pacific in accordance with War Plan Orange. The space required for large reserves of fuel oil in USN treaty cruisers affected other design considerations.⁸⁰

By the middle of the 1930s, the IJN had made considerable strides in perfecting the night-fighting technologies for its treaty cruisers and night combat groups. This included flashless powder, high-powered binoculars, parachute-suspended star shells, and long-range torpedoes. Though Japanese industry lagged behind the West in many respects, in the field of optics Japan was by the 1930s at the forefront. This was highlighted in the form of the shipboard Type 88 binocular, first produced in 1932. Possessing outstanding magnification and light-gathering capability, this binocular, and types like it, on several occasions during the Solomons Campaign enabled keen-eyed lookouts to spot USN ships before the Japanese were detected by American radar. Regarding illumination, while powerful searchlights were traditionally utilized to spot enemy ships at night, this had the disadvantage of also revealing one's own position and inviting enemy counter-fire. In the IJN, emphasis was instead placed on parachute-suspended star shells, which by virtue of their long burn time over the target area represented an improvement over earlier types, which lacked parachutes. Japanese captains also utilized illumination flares

⁸⁰ Jordan, *Warships After Washington*, 115.

dropped from above by their cruisers' floatplanes; this proved especially useful in low-lying cloud conditions, most notably during the First Battle of the Solomon Sea.⁸¹

The greatest technological manifestation of the IJN cruisers' night-fighting potential, however, was the Type 93 torpedo. Known in the West as the "Long Lance," the Type 93 was easily the best torpedo of World War II, and was carried by Japanese heavy cruisers from 1938 onward. It was launched via a trainable triple- or quadruple-tube mount, located on the cruiser's weather deck. Each cruiser carried two or four such mounts, and since 16–24 torpedoes were normally carried, the ships had enough for a full second salvo if needed. Thanks to a specially designed quick reload system, the second salvo could be loaded and fired in as little as three to five minutes. This gave IJN treaty cruisers unparalleled offensive punch in a night engagement. The 2,700-kg, 61-cm (diameter) Type 93 was an engineering masterpiece. Propelled by oxygen, it left no wake and contained an enormous 490-kg explosive warhead. It had an astonishing range of 40,000 meters at 36 knots, 32,000 meters at 40 knots, and 20,000 meters at 48 knots. By comparison, the Type 93's closest American counterpart, the unreliable 21-in. (53-cm) Mark XV, had a range of 15,000 yards at 26.5 knots, and 6,000 yards at 45 knots. USN heavy cruisers in any case did not carry torpedoes during the war, relying instead on gun power as the arbiter of battle. It is noteworthy that the Type 93 was the only technological advantage the Japanese retained over the Allies throughout the entire Pacific War, from 1941 to 1945. Without a doubt, the synergy of advanced weapons, ceaseless drill, and the perfection of a coherent night-fighting system represented one of the Japanese Navy's trump cards.⁸² In the words of Rear Admiral

⁸¹ Evans and Peattie, *Kaigun*, 275; Mahnken, "Asymmetric Warfare at Sea," 105–06; Ohmae Toshikazu, "The Battle of Savo Island," in *The Japanese Navy in World War II*, 235.

⁸² Richard B. Frank, *Guadalcanal: The Definitive Account of the Landmark Battle* (New York: Penguin Books, 1992), 85–86; Lacroix and Wells, *Japanese Cruisers of the Pacific War*, 246–49; Mahnken, "Asymmetric Warfare at Sea," 114; Ronald H. Spector, *Eagle Against the Sun: The American War With Japan* (New York: The Free Press, 1985), 19, 45.

Tanaka Raizo: “Most of Japan’s torpedo craft at the outbreak of war were commanded by qualified experts. I believe it may be said with justifiable pride that at the beginning of the war our torpedo forces were the best night combat forces in the world.”⁸³

While the IJN was far ahead of its rivals in night-fighting weapons technology and tactics, it critically lagged in other respects. Two of its more glaring technical shortcomings were the lack of effective radar and antiaircraft weaponry. Both of these oversights would come back to haunt the Japanese Navy by 1943, as the USN perfected its own combat system for radar-guided night fighting, and the Allies began fielding overwhelming airpower. It is remarkable, given its great focus on night combat, that the IJN did not pursue radar development more vigorously. Japan had begun exploring radar technology almost as early as Great Britain and the United States, but it failed to properly mobilize its scientific talent. The effort was therefore haphazard and unproductive. IJN planners seemed more concerned with technologies of immediate practical applicability—hence the focus on advanced optics and torpedoes. While this was sufficient for the IJN to hold its own in 1941–1942, once the USN was able to iron out its own technical and tactical defects, radar became the great night-fighting game changer. Having fallen behind in the electronics race, there was very little the Japanese could do to catch up, once enemy radar robbed the IJN of its ability to use darkness as an ally. On the eve of war the Japanese belatedly awoke to the importance of radar, and by late 1941 had developed several prototype air-search sets. As could be expected from first-generation units however, their range and reliability was poor. Meanwhile, in the period under study, IJN heavy cruisers entirely lacked shipboard surface-search or fire-control radars.⁸⁴

⁸³ Tanaka Raizo, “The Struggle for Guadalcanal,” in *The Japanese Navy in World War II*, 178.

⁸⁴ Evans and Peattie, *Kaigun*, 411–15; IJN heavy cruisers were first equipped with the No. 21 air-search radar in mid-1943; Lacroix and Wells, *Japanese Cruisers of the Pacific War*, 318–20; 773–77.

However, until the end of 1942 the Japanese were able to overcome their handicap in electronics by employing well-trained lookouts, and excellent, high-powered optical equipment. Despite the USN's possession of superior radar—particularly the centimetric-wave SG set—its lack of night-fighting doctrine and training largely neutralized this technological advantage. The presence of radar sets aboard USN ships was of little help against the electronically-challenged Japanese, because most American officers failed to properly utilize the advantages this conferred. By its neglect of night-fighting tactics in the interbellum, the USN was in 1941–1942 largely unable to turn radar into a functional and timely battle aid. In the Solomons, the Americans had to learn how to use radar the hard way.⁸⁵

The lack of a truly effective shipboard anti-aircraft weapon, and especially the absence of an intermediate-caliber gun, became a serious problem for the Japanese as the Allies gained air superiority over the Pacific in 1943. Luckily for the IJN surface fleet, throughout much of the Pacific War's first year the Japanese army and naval air forces held air supremacy, and thus the ships' weak anti-aircraft armament was not a serious issue. However, by the end of the Solomons Campaign these defects were becoming manifest. At the same time, the USN began fielding a deadly array of shipboard anti-aircraft weaponry, which by war's end would take an enormous toll on Japanese aircraft. As the conflict progressed, the Japanese continued adding light anti-aircraft guns on their ships. However, this proved unsuccessful due to the weapons' inherent defects, coupled with the overwhelming nature of American airpower in the last two years of the war.⁸⁶

By the start of the Pacific War, Japanese heavy cruisers were equipped with two main types of anti-aircraft gun: the medium twin-mounted 5-in. (12.7-cm) Type 89, and the light twin-

⁸⁵ Frank, *Guadalcanal*, 294.

⁸⁶ Mark Stille, *Imperial Japanese Navy Heavy Cruisers 1941–45* (Oxford: Osprey Publishing, 2011), Kindle eBook Loc. 1253–63.

mounted 25-mm Type 96. The Type 96, developed by the French Hotchkiss firm, was the standard IJN light anti-aircraft gun of World War II. Though a reliable weapon, it suffered from low training and elevating speeds, insufficient magazine capacity (necessitating frequent reloads which slowed the rate of fire), and excessive muzzle blast. The medium Type 89 was a more adequate gun by early-war standards; it was not only reliable, but also possessed a good rate of fire, high muzzle velocity, and rapid training and elevating speeds. The weapon's chief drawback was its short range and mediocre fire director (the Type 91, fitted on most IJN heavy cruisers), which had trouble tracking high-speed targets. Furthermore, due to production delays, not all Japanese heavy cruisers were equipped with the Type 89. A number of ships retained the older, 1920s vintage single-mounted 4.7-in. (12-cm) Type 10—an inadequate weapon by World War II standards.⁸⁷

Ultimately, the medium Type 89 and light Type 96 proved insufficient to deal with large numbers of Allied aircraft. The IJN was further hampered by the lack of an intermediate-caliber anti-aircraft weapon like the USN 40-mm gun, designed by the Swedish Bofors firm. This superb weapon began equipping American ships in numbers in late 1942, and would prove the preeminent anti-aircraft gun of World War II. At the 26 October 1942 South Pacific Ocean Sea Battle (Battle of the Santa Cruz Islands), the Bofors cut a bloody swath through what remained of the IJN's elite carrier air arm. The 40-mm Bofors, combined with the development of the revolutionary VT proximity fuse—which unlike its predecessor required no time setting, being triggered by passing aircraft—made USN warships lethal anti-aircraft platforms. The IJN had

⁸⁷ Lacroix and Wells, *Japanese Cruisers of the Pacific War*, 235–45; Stille, *Imperial Japanese Navy Heavy Cruisers*, Loc. 161–212.

nothing comparable with which to match these two American advances, as the aerial balance began to tip in the Allies' favor toward the end of 1942.⁸⁸

Design-wise, the cost of the IJN's fixation on heavy armament and high speed was not inconsiderable. The Naval General Staff, obsessed with cramming as much firepower as possible into what was a relatively small hull, chose to ignore warnings that this might make its cruisers overweight. Weight-saving measures often focused on the hull rather than the weapons and upperworks, thus weakening longitudinal strength while raising the ship's center of gravity. The armament versus stability debate brought the naval staff into conflict with the designers, and most of all with Constructor Hiraga. In 1926, Vice Admiral Hiraga was "kicked upstairs" to become the head of the Shipbuilding Section of the Navy Technical Research Institute, probably because of his intransigence vis-à-vis the hardliners. Eventually, he resigned from the navy and joined the faculty of Tokyo Imperial University. Hiraga's subordinate, Constructor Commander Fujimoto Kikuo, who was more malleable to the "suggestions" of the naval staff, replaced him. As a naval architect, Hiraga's major concern was stability and seaworthiness; this was inherently at odds with the hardliners' insistence on heavy weaponry at all cost. Ultimately, the constructors were overruled by what the naval staff considered essential for the heavy cruisers to succeed against a numerically superior USN.⁸⁹

The hardliners' dismissal of the finer points of ship design echoed their similar sentiments regarding training; to make an omelet, the IJN, and above all the Naval General Staff, was more than willing to break some eggs. While this attitude resulted in some very powerful ships indeed, Japanese treaty cruisers in consequence suffered from weight and stability issues. While the cruisers were taken in for modernization during the 1930s to keep them

⁸⁸ Dull, *A Battle History of the Imperial Japanese Navy*, 227–33; Evans and Peattie, *Kaigun*, 508–09; Lacroix and Wells, *Japanese Cruisers of the Pacific War*, 310–11; Stille, *Imperial Japanese Navy Heavy Cruisers*, Loc. 1253–63.

⁸⁹ Evans and Peattie, *Kaigun*, 225–26; Lacroix and Wells, *Japanese Cruisers of the Pacific War*, 717–18.

technologically up-to-date, the yard hands were also kept busy rectifying issues surrounding the ships' seaworthiness. The need for this became apparent in the wake of two very serious incidents. The first happened on 12 March 1934, when the *Tomozuru*, a fleet torpedo boat (essentially a small destroyer), capsized with the loss of one hundred men in heavy weather off Sasebo. The investigation committee concluded that the vessel's inherent instability was the cause; above all due to the navy's intentional prioritization of combat power over safety in design. In a perverse twist, the investigation committee was headed by the hardliner Admiral Kato Kanji, former Chief of the Naval General Staff, whose policies had been largely responsible for the tragedy in the first place. The committee leveled the blame on Hiraga's successor, Fujimoto Kikuo, who left the navy in disgrace and died less than a year later. He was replaced by Captain Fukuda Keiji, who remained the head of the Shipbuilding Section until early 1942.⁹⁰

While corrective measures were being taken in the wake of the *Tomozuru's* capsizing, a second incident rocked the IJN on 26 September 1935, when the Fourth Fleet (a temporary training formation) was caught in a typhoon east of northern Honshu. Although no vessels were lost, many suffered extensive damage, and 54 men were killed. Some destroyers sustained rolls of 75 degrees, while the bow sections of the heavy destroyers *Hatsuyuki* and *Yugiri* broke off. The heavy cruisers that were present also suffered; their amidships joints weakened by the battering of the wind and seas. The *Tomozuru* and Fourth Fleet incidents confirmed the need to reexamine vessel construction, and to correct a number of defects. In the heavy cruisers, this included the addition of extra (liquid) ballast to improve stability, and modifications to the hull members to improve longitudinal strength. In the end, these incidents, though tragic, served to jolt the IJN from its complacency. They helped ensure that the heavy cruisers which saw action

⁹⁰ Evans and Peattie, *Kaigun*, 228, 240–43; Jentschura, Jung, and Mickel, *Warships of the Imperial Japanese Navy*, 128–29; Lacroix and Wells, *Japanese Cruisers of the Pacific War*, 717–21.

in the Pacific War were not just tactically deadly, but also safe for their crews. In the cruisers' case, the modifications to improve seaworthiness did not appreciably degrade their combat capability.⁹¹

In fairness, it is important to note that any navy would have suffered damage to its ships in similar weather conditions. At its peak, the Fourth Fleet typhoon sustained winds of nearly eighty knots, with seas as high as 18 meters. Even ships without stability issues or other defects would have suffered, at the very least, superstructure damage, as well as crew injuries and possibly fatalities. On 18 December 1944, U.S. Admiral William "Bull" Halsey ran his ships through a typhoon similar to the one that ravaged Fourth Fleet. Halsey's losses were far greater than those the IJN suffered in 1935: three destroyers were sunk, a number of ships sustained severe damage, and hundreds of sailors drowned.⁹²

Japan's first treaty cruisers proper were the four ships of the *Myoko* class: *Myoko*, *Nachi*, *Haguro*, and *Ashigara*, built in 1924–1929, and named after mountains.⁹³ Designed by Constructor Hiraga from the outset to make the absolute most of the allotted treaty tonnage, the ships differed somewhat from the preceding *Furutakas*, which had been designed before the Washington Conference. The *Myokos* were, of course, larger and heavier, and perhaps most notably were equipped with five twin 20-cm turrets instead of three.⁹⁴ This—combined with the torpedoes so ubiquitous on Japanese cruisers—gave the *Myokos* tremendous offensive power in a surface engagement. Comparable foreign designs usually fielded eight 20-cm guns in total, while the Japanese (and early American) treaty cruisers fielded ten. In addition, no foreign treaty

⁹¹ Evans and Peattie, *Kaigun*, 243–45; Lacroix and Wells, *Japanese Cruisers of the Pacific War*, 128, 151, 721–24.

⁹² Lacroix and Wells, *Japanese Cruisers of the Pacific War*, 723; Dan van der Vat, *The Pacific Campaign: The U.S.-Japanese Naval War 1941–1945* (New York: Touchstone, 1992), 365–66.

⁹³ All Japanese cruisers were named after mountains or rivers; Hara, *Japanese Destroyer Captain*, 295.

⁹⁴ The standard Japanese heavy cruiser naval gun of the interbellum and World War II was the 20-cm 50-cal Type 3; it had a maximum rate of fire of four to five rounds per minute; Lacroix and Wells, *Japanese Cruisers of the Pacific War*, 754; Stille, *USN Cruiser vs. IJN Cruiser*, Loc. 610–13.

cruiser could match the *Myokos*' heavy torpedo armament.⁹⁵ The ships were initially fitted with fixed triple tubes—two on each side for 12 tubes in total—but during their modernization in 1939–1941 received the superior, trainable quadruple mounts for the Type 93 torpedo. Four such mounts were fitted, along with enough torpedoes (24) for multiple salvos. Armor protection was also somewhat improved over the preceding class: 102 millimeters of belt armor versus 76 millimeters, while both the *Myokos* and preceding *Furutakas* carried anti-torpedo bulges and 35 millimeters of deck armor. While this level of protection was insufficient to turn aside direct hits of the cruisers' own caliber of guns—a traditional principle of warship design—armor was nonetheless considered sufficient to provide immunity from indirect 20-cm hits, as well as direct hits from 6-in. (15.2-cm) shells or less. Although the protection of these ships could not be considered outstanding, it compared favorably with the armor schemes of contemporary foreign cruisers.⁹⁶

The *Myoko*-class ships were, however, both overweight and somewhat affected by instability when first completed. Their standard displacement was well over the treaty limit, at 10,980 tons. As discussed, this was at least partly due to the persistent meddling of the Naval General Staff, which insisted on a very heavy gun and torpedo armament over the reservations of the naval architects. While the stability of the *Myoko*-class was initially deemed adequate, it was not particularly good. After the revision of standards in the wake of the *Tomozuru* incident, the *Myokos*' stability was no longer considered within acceptable limits. In any event, issues surrounding construction, stability, and weight became even more pronounced in the next two

⁹⁵ USN treaty cruisers were initially fitted with torpedoes, but these were removed before the war due to concerns over the ships' safety if the "fish" were hit in battle and exploded onboard; Hiraga voiced similar reservations, but these were overruled by the Naval General Staff; Jordan, *Warships After Washington*, 130–32; Lacroix and Wells, *Japanese Cruisers of the Pacific War*, 82–83.

⁹⁶ Jentschura, Jung, and Mickel, *Warships of the Imperial Japanese Navy*, 81–83; Jordan, *Warships After Washington*, 118, 120–21, 123–24, 128–29; Lacroix and Wells, *Japanese Cruisers of the Pacific War*, 808–13.

classes of Japanese cruisers. Despite their flaws, the *Myokos* were considered outstanding warships, and went on to play important roles in the early 1942 Java Sea Campaign; in particular the 27 February–1 March Sea Battle off Surabaya.⁹⁷

The next of the series, the four ships of the *Takao* class—*Takao*, *Atago*, *Maya*, and *Chokai*—represented the apex of Japanese treaty cruiser development. They were drawn up by Constructor Fujimoto (the soon-to-be ousted Hiraga was on assignment in Europe at the time), who followed the general pattern of the preceding *Myoko* class. The *Takaos* were the largest and most powerful of Japan's treaty cruisers, and were intended to function as fleet flagships. Built between 1927 and 1932, with a standard displacement of 11,350 tons when completed, the ships blatantly violated treaty limits. As in the preceding *Myokos*, the *Takao*-class was armed with ten 20-cm guns in five double turrets (although these could now be elevated 70 degrees, allowing them to, theoretically, engage aircraft). The ships were also the first Japanese treaty cruisers to be equipped with trainable twin torpedo-tube mounts when first built, although these were replaced by improved units during modernization of the class between 1938 and 1941. The *Takaos* entered the Pacific War armed with four improved, trainable quadruple mounts for the oxygen-propelled Type 93, with a normal loadout of 24 "fish." Armor protection was similar to the *Myoko*-class as well (although improved over the magazines), with 102 millimeters of belt armor, and a 35-mm armored deck, intended to provide protection against indirect 20-cm hits, and direct hits from 15.2-cm shells (the latter of which, incidentally, was the caliber of armament carried by World War II American light cruisers). However, the effectiveness of the ships' vertical protection was somewhat lessened in practice, due to the cruisers' overweight condition, which kept the armored belt partially submerged. The *Takaos*, like other Japanese treaty cruisers,

⁹⁷ Lacroix and Wells, *Japanese Cruisers of the Pacific War*, 88–92, 809.

also possessed anti-torpedo bulges on the hull, but these were of dubious utility against all but the smallest aerial torpedoes.⁹⁸

The *Takaos*' role as fleet flagships implied additional onboard space for flag officers and their staffs. As such, the most striking feature of the class was a massive bridge structure, which, in the words of three German naval historians, "would not have disgraced a battleship."⁹⁹ Containing no less than ten different levels and three times the volume of the superstructure fitted to the *Myokos*, the new bridge was designed to centralize command and control, and to enable the *Takao*-class ships to effectively spearhead night engagements. Even for well-drilled crews such actions were bound to be highly complicated affairs, by virtue of the need to carefully coordinate maneuvers, gunfire, and torpedo attacks in darkness. While the design satisfactorily addressed the command and control question, it in turn contributed to the overweight condition of the class. The large superstructure also made an inviting target for enemy guns. Unsurprisingly, the *Takaos* proved to be more top-heavy and less stable than their predecessors. Soon after their completion, work had to be undertaken to rectify these concerns.¹⁰⁰

Their early issues notwithstanding, the *Takaos* were immensely powerful surface warships, and were quite possibly the most powerful treaty cruisers ever built. During the Pacific War, they also proved effective in their roles as flagships; at the First Battle of the Solomon Sea, Vice Admiral Mikawa Gunichi flew his flag in *Chokai*. As discussed in Chapter I, Japanese doctrine in the late 1930s envisioned its heavy cruisers—assigned to the Second Fleet—as integral parts of an officially designated *Yusen Butai*, or Night Battle Force. This force was in

⁹⁸ Jentschura, Jung, and Mickel, *Warships of the Imperial Japanese Navy*, 83–84; Jordan, *Warships After Washington*, 123–25, 138–39; Lacroix and Wells, *Japanese Cruisers of the Pacific War*, 129–32, 813–17.

⁹⁹ Jentschura, Jung, and Mickel, *Warships of the Imperial Japanese Navy*, 84.

¹⁰⁰ Evans and Peattie, *Kaigun*, 229–32; Jordan, *Warships After Washington*, 139; Lacroix and Wells, *Japanese Cruisers of the Pacific War*, 128, 151.

turn subdivided into four *yasengun*, or night combat groups. Each *yasengun* was to contain a *sentai* of four heavy cruisers each, operating in conjunction with a destroyer squadron. The IJN intended the *Takaos*, by virtue of their power and roles as flagships, to form the nucleus of the *Yusen Butai* (alongside the four *Kongo*-class fast battleships). This nucleus was to spearhead the attack on the enemy fleet, in advance of the other night combat groups, as a prelude to the climactic daylight fleet engagement.¹⁰¹

The 1930 London Conference deeply marked subsequent Japanese cruiser development. While the resultant treaty, limiting Japan to 60.2 percent in cruiser tonnage with Great Britain and the United States, caused storms of anguish in IJN hardliner circles, it also altered the characteristics and classification of the ships developed after its ratification. After the London Conference, treaty cruisers were subdivided into two categories, based on the caliber of their primary armament. Cruisers with guns greater than 6.1 inches (15.5 centimeters)—which constituted all Japanese treaty cruisers built before this time—were henceforth designated subcategory (a), or heavy cruisers, while treaty cruisers with a main armament of 6.1 inches or less were known as subcategory (b), or light cruisers.¹⁰² As Japan had—by the 1930 treaty’s imposition of a quantitative tonnage ratio—already reached its allotted cap in heavy cruisers with the 12 units completed (the four *Furutakas*, four *Myokos*, and four *Takaos*), attention was shifted to the construction of light cruisers. However, in a rather devious but not unheard-of move, the Japanese designers planned the next class of cruiser to be able to accommodate the larger 20-cm weapons in the event of war (or the treaty’s abrogation).¹⁰³ The four units of the next series of

¹⁰¹ Lacroix and Wells, *Japanese Cruisers of the Pacific War*, 250–51.

¹⁰² To further complicate the nomenclature, the Japanese traditionally referred to cruisers greater than 7,000 tons as “first-class” or “A-class” cruisers, and cruisers of 7,000 tons or less as “second-class” or “B-class” cruisers; after the London Conference, A-class cruisers became unofficially known as heavy cruisers; Lacroix and Wells, *Japanese Cruisers of the Pacific War*, 124, 436, 697.

¹⁰³ While this might be seen as a wily attempt to circumvent treaty obligations, it was not the only time such a contingency was worked into a warship design: Germany’s *Scharnhorst*-class battleships (completed 1938–1939)

Japanese cruiser, the *Mogami* class, therefore started their lives as 15.5-cm-gunned light cruisers, but by the start of the Pacific War had all been rearmed with 20-cm weapons, and assumed their proper mantle as heavy cruisers.¹⁰⁴

While originally built as light cruisers and armed with 15.5-cm guns, *Mogami*, *Mikuma*, *Suzuya*, and *Kumano* inherited all the other qualities of Japanese heavy cruiser design—both the good and the bad. Before their reclassification as heavy cruisers proper, after rearming in 1939–1940, the *Mogami*-class ships were in essence very large light cruisers. They carried their original 15.5-cm main armament in five triple turrets, for a very heavy broadside of 15 guns. Four triple torpedo-tube mounts were fitted, with a wartime load-out of 18-24 Type 93s; almost the equal of the preceding *Myokos* and *Takaos*. In addition, armor protection was comparable to the preceding classes, with a tapering 100-mm belt, and 35 millimeters of deck armor. The *Mogamis* were, of course, large and predictably overweight ships, with a standard displacement of 11,200 tons on completion. *Mogami* and *Mikuma* were built in 1931–1935, while the construction and commissioning of *Suzuya* and *Kumano*, begun in 1933, was delayed until 1937 after trials of the first two units revealed a number of defects—the most serious of any of Japan’s cruisers. The ships proved unstable, and their comparatively light hulls, made weaker by defective electric welding, were unable to bear the strain of high speeds, heavy weather, or firing of the main armament. These faults were eventually corrected, and with their reemergence as heavy cruisers in 1940 (with ten 20-cm guns in five double turrets), these handsome ships were, like their predecessors, some of the most powerful cruisers in the world. *Mogami* and *Mikuma*

were originally built with 11-in. (28-cm) triple turrets, but the intention was to replace these with 15-in. (38-cm) double turrets when the latter became available; Ireland, *Jane’s Battleships of the 20th Century*, 46–47.

¹⁰⁴ Evans and Peattie, *Kaigun*, 238–39; Jentschura, Jung, and Mickel, *Warships of the Imperial Japanese Navy*, 84–86; Jordan, *Warships After Washington*, 302.

went on to defeat their Allied counterparts in the Sea Battle off Batavia (Battle of Sunda Strait) on 1 March 1942.¹⁰⁵

As addressed in Chapter I, Japan walked out of the Second London Conference in 1936, effectively abrogating the treaty system. This rekindled a full-blown arms race with the United States, whose rapid escalation in warship construction by the end of the decade deeply dismayed IJN leaders. During this period, between the end of the treaty era and the beginning of the Pacific War, Japan completed two more heavy cruisers. Unfettered by considerations of tonnage limitations, in the *Tone* class the designers were able to achieve a balance in design unmatched by the ships' 16 treaty cruiser predecessors. Reflecting their rather special mission profile, the two ships, *Tone* and *Chikuma*, also differed in layout from other Japanese cruisers. In Japanese doctrine, heavy cruisers served an important function as fleet scouts. This entailed the need to embark floatplanes for reconnaissance, and all Japanese heavy cruisers were normally equipped with aircraft and the catapults to launch them. However, while the preceding 16 heavy cruisers had been designed primarily as surface warships with a secondary, albeit vital, fleet scout function, in the *Tone* class this priority was reversed. Instead of the two or three floatplanes normally carried by other cruisers, the *Tones* had fully developed aviation facilities on the aft deck to stow, launch, recover, and handle up to eight aircraft.¹⁰⁶

Visually, the *Tone* class represented a novel departure from other Japanese heavy cruisers. While originally intended to be repeats of the *Mogami* class—having been planned while the treaty system was still in effect—the *Tones*' design was altered as they were being built (1934–1939) to turn them into 11,231-ton (standard displacement, as designed) hybrid

¹⁰⁵ Evans and Peattie, *Kaigun*, 239; Lacroix and Wells, *Japanese Cruisers of the Pacific War*, 438–43, 449–52, 486–87, 817–22.

¹⁰⁶ Asada, *From Mahan to Pearl Harbor*, 239–41; Jentschura, Jung, and Mickel, *Warships of the Imperial Japanese Navy*, 87.

floatplane-carrier heavy cruisers, known in the IJN as aircraft cruisers. The unique appearance of the class is perhaps best summarized by Captain Hara Tameichi who, in his memoirs, referred to *Tone* as “a weird-looking ship with all of its eight 6-inch [*sic*] main guns mounted on the bow deck.”¹⁰⁷ Reflecting their envisioned role as floatplane carriers, their entire aft decks were dedicated to aircraft handling operations. Since the *Tones*’ role as powerful surface warships was still emphasized, their 20-cm main armament—eight guns in four double turrets—was arranged forward of the bridge, not unlike the interbellum battleship designs of Great Britain and France.¹⁰⁸ The class was also fully equipped for torpedo warfare, with four trainable triple tubes (as in the *Mogamis*) and space for 24 torpedoes. While the arcs of fire of the two rearmost turrets were not very good, this arrangement nonetheless enabled the *Tones* to function both as fleet scout specialists, and as surface combatants if the need arose.¹⁰⁹

Despite their unorthodox turret arrangement, the *Tone* class was probably the best balanced of the IJN’s heavy cruisers, and they were certainly the best armored. The concentration of armament forward enabled a much more compact and effective protection scheme around the magazines, and belt and deck armor was also, at 100 millimeters and 31 millimeters respectively, considered adequate and in keeping with Japanese design philosophy. The ships dispensed with anti-torpedo bulges on the hull, as these were mostly useless against the larger torpedoes developed before World War II. As it was, *Tone* and *Chikuma* spent the majority of the Pacific War’s first year accompanying the carrier fleet—the IJN placing great emphasis on the use of cruiser floatplanes as the fleets’ primary means of reconnaissance.

¹⁰⁷ Hara, *Japanese Destroyer Captain*, 98.

¹⁰⁸ The British *Nelson*-class and French *Dunkerque*- and *Richelieu*-classes all had their main armament arranged forward of the superstructure, in order to maximize the effectiveness of the available armor protection; Ireland, *Jane’s Battleships of the 20th Century*, 22–25, 128–29.

¹⁰⁹ The IJN was ultimately unhappy with the *Tones*’ turret arrangement, and subsequent heavy cruisers—planned but never completed—developmentally followed the *Mogami* class; Jentschura, Jung, and Mickel, *Warships of the Imperial Japanese Navy*, 87; Lacroix and Wells, *Japanese Cruisers of the Pacific War*, 822–24.

Therefore, the *Tones* saw no action against their Allied cruiser counterparts. Their value as scouting units precluded their use in a more traditional surface warship role, and the biggest mark the two were to leave on history was in their deployment at the Battle of Midway. There, the poorly planned and shoddily executed Japanese air-search delayed the discovery of the American carrier fleet, and helped set in motion a train of events which would end in catastrophe for Japan's carrier force.¹¹⁰

At the start of the Pacific War, the two primary floatplane types embarked onboard IJN heavy cruisers were the Aichi E13A Type 0 (known as Jake to the Allies), and the Nakajima E8N2 Type 95 (known as Dave). The older Type 95—with its slow speed and modest 485-nm range—was by the start of the war obsolete as a reconnaissance seaplane, and was best employed in spotting or antisubmarine patrol duties. The Type 0 was more modern, and had a range of 1,128 nautical miles. However, even the comparatively well-equipped *Tone* class normally only carried three Type 0s and two Type 95s, as was the case at Midway. This left the Japanese carrier fleet heavily dependent on a very modest reconnaissance contingent. In hindsight, it is obvious that the IJNs overreliance on cruiser floatplanes as the eyes of the fleet, in lieu of carrier-based scout bombers, was deeply flawed and had dire consequences. As in the design and development of its heavy cruiser arm, the IJNs fixation on offensive striking power had a heavy price—by placing excessive value on the attack at the expense of other, finer points of naval strategy.¹¹¹

On the eve of the Pacific War, the IJN had at its disposal a well-honed heavy cruiser force. The 18 vessels which comprised this force were some of the finest warships of their kind ever built, and would go on to make a significant impact on the conflict. However, while as surface warships the heavy cruisers had few equals, they reflected not only the IJNs strengths,

¹¹⁰ Lacroix and Wells, *Japanese Cruisers of the Pacific War*, 508–13; Stille, *Imperial Japanese Navy Heavy Cruisers*, Loc. 1157–77.

¹¹¹ Parshall and Tully, *Shattered Sword*, 108, 484–86.

but also its limitations. As tactical offensive power had been prioritized over virtually all other considerations, the Japanese heavy cruiser arm was imbued with underlying weaknesses which manifested themselves by the end of 1942. Until then, however, for the Allies the first six months of the Pacific War would be a nightmarish learning experience, as the IJN and its heavy cruiser force swept all before it in a whirlwind of conquest.

CHAPTER III

THE HEAVY CRUISER'S IMPACT ON THE PACIFIC WAR, 1941–1942

Japanese heavy cruisers were active throughout the first critical year of the Pacific War, and left a profound mark on naval history. From the opening blow at Pearl Harbor, through the sweeping Japanese conquest of Southeast Asia, to the Coral Sea and Midway battles, and from beginning to end of the intense, arduous campaign in the Solomons, the IJN heavy cruiser arm was present. In the engagements where this force had a chance to face its Allied counterparts in gunnery and torpedo duels, especially at night, it repeatedly proved its mettle. Ceaseless and realistic training during the interbellum, combined with notable feats in ship design, paid significant dividends for the Japanese in 1941–1942, as they subjected the Allied navies to heavy losses, and several humiliating defeats. However, as will be addressed, the Japanese navy leadership time after time showed itself unable, or unwilling, to capitalize on the tactical success of its naval units, and displayed an astonishing timidity on the operational and strategic level, at complete variance with the aggressive and highly spirited conduct of many vessel crews.

The heavy cruiser force was an integral part of an effective IJN tactical night combat system, and in the Pacific War's first year, this delivered. Even though, from the opening day of hostilities, the naval war proceeded quite differently from the predictions of Japanese prewar planners, the cruisers' high state of efficiency nonetheless proved relevant, as the ships saw night combat aplenty. Although the envisioned interception-attrition operations, as part of the decisive fleet engagement—for which the cruiser arm had trained so painstakingly—did not materialize during the Pacific War *per se*, the Night Battle Force had all the prerequisites in place to pose a deadly threat to its Allied opponents when the conflict began. The Japanese ships' design

emphasis on offensive operations, combined with their crews' night-fighting skills, served the IJN well in the South Pacific, regardless of their strategic purpose in Japan's overall war plan.

When the Japanese First Air Fleet—also known as the Mobile Force or Carrier Fleet—steamed toward Pearl Harbor for the opening attack of the Pacific War, it was accompanied by *Sentai 8*, composed of *Tone* and *Chikuma*. These two ships had an important scouting role to play in the raid on the American Pacific Fleet. Floatplanes from the two cruisers were used to reconnoiter Pearl Harbor, as well as the USN's other anchorage at Lahaina, immediately before the carrier air strike. This was a vital intelligence-gathering mission, since, as far as the IJN was concerned, the war's outcome rested on the First Air Fleet's ability to cripple American forces at the outset of hostilities, in order to prevent these from interfering with the Japanese first-stage operations in Southeast Asia. *Sentai 8* had been attached to the First Air Fleet since September 1941, and together with other supporting units, including two fast battleships and a destroyer division, comprised the screening element for what was the IJN's first operational carrier-centric task force. With its six fleet carriers, this force was, by 1941 standards, the most powerful carrier strike force in the world.¹¹²

Before dawn on 7 December (8 December for the Japanese, who used Tokyo time, west of the International Date Line) *Tone* and *Chikuma* launched one Type 0 reconnaissance seaplane each, and these two dutifully scouted Pearl Harbor and Lahaina in advance of the carrier air strike. Information on U.S. fleet dispositions had already been received from scouting submarines, but the launch of the cruiser floatplanes was still carried out to confirm the situation immediately preceding the attack. To the IJN's dismay, the American carrier fleet was nowhere

¹¹² Fukudome Shigeru, "The Hawaii Operation," in *The Japanese Navy in World War II*, 16; Genda Minoru, "Affidavit of Minoru Genda," in *The Pearl Harbor Papers*, 16; Genda, "Analysis No. 1 of the Pearl Harbor Attack, Operation AI," in *The Pearl Harbor Papers*, 25, 31; Genda, "How the Japanese Task Force Idea Materialized," in *The Pearl Harbor Papers*, 12.

to be found, but the submarine and aircraft scouts confirmed the presence of the American Pacific battle fleet at Pearl Harbor. The Lahaina anchorage, on the other hand, was devoid of American naval vessels. The U.S. battleships at Pearl Harbor thus became the priority targets. This set the stage for the “day of infamy.”¹¹³

While the Japanese carrier attack on Pearl Harbor succeeded in its immediate tactical objective—preventing the U.S. Pacific Fleet from interfering in Japan’s southward advance—the absence of the American carriers was a major setback for the IJN. This ensured that the Americans still had the striking power to threaten Japan’s maritime defense perimeter, and meant that the IJN would have to seek out the U.S. carriers at another opportunity—at sea, in a decisive battle where both sides could attack and defend to the full extent of their abilities. The Pearl Harbor raid, brainchild of the IJN’s commander in chief, Admiral Yamamoto Isoroku, and commanded by Vice Admiral Nagumo Chuichi, also failed to hit the logistical installations on Oahu, most notably the large and poorly defended oil storage tanks, the destruction of which would have rendered what was left of the USN Pacific Fleet harbor-bound from lack of fuel. Vice Admiral Nagumo very much conducted naval strategy “by committee,” a fairly common method of leadership in the IJN; he sought consensus-building and collective decision-making when addressing operational questions, and rarely deviated from his staff’s recommendations. This did not lend itself well to assertive management, or a rapid change of plans in the heat of battle.¹¹⁴

While in hindsight it is clear that a second air strike, or at least a more thorough search of the surrounding waters for the missing U.S. carriers, might have been called for, at the time the

¹¹³ Genda, “Analysis No. 2 of the Pearl Harbor Attack, Operation AI,” in *The Pearl Harbor Papers*, 40–44.

¹¹⁴ Patrick H. Donovan, “Oil Logistics in the Pacific War,” *Air Force Journal of Logistics* 28, no. 1 (2004): 33–35; Parshall and Tully, *Shattered Sword*, 13–15; Mark Stille, *Yamamoto Isoroku* (Oxford: Osprey Publishing, 2012), Kindle eBook Loc. 1095–1103; Ugaki, *Fading Victory*, 141.

Japanese were satisfied with their stunning tactical victory. Understandably elated at their slight losses, they set a course for home. However, the IJN's withdrawal from Hawaiian waters foreshadowed a pattern which became all-too familiar in the months ahead, as Japanese admirals repeatedly pulled back from the brink of decisive commitment, and thus prevented tactical successes from becoming strategic triumphs. As if anticipating future events, the limit of IJN logistics also began rearing its ugly head. Nagumo was highly sensitive to the fleet's fuel reserves, and did not possess the logistic support necessary for lengthy operations far from friendly bases. Japanese ship design, as has been discussed, focused on the offensive mission, and in keeping with the IJN's *kantai kessen* doctrine, did not emphasize a large operational radius. Nor did the Japanese Navy have anything remotely resembling an efficient fleet train of oilers and supply ships. Staying in the area to locate and engage the U.S. carriers, or conducting repeated strikes on Pearl Harbor, would have cut further into the fleet's limited fuel supply, and probably contributed to Nagumo's decision to withdraw without pursuing either alternative.¹¹⁵

Furthermore, while it is certainly true that sitting in the silt of Pearl Harbor the American battle fleet was unable to interfere with the Japanese offensive into Southeast Asia, the question remains if the USN would have had the ability to do so anyway. A fleet-wide American naval expedition to the Far East would have required a prodigious amount of support shipping, and in 1941 this does not appear to have been available.¹¹⁶ It must also be recalled that American war plans by the 1930s envisioned a gradual, step-by-step approach toward the Western Pacific in the event of war, and not a rapid, aggressive sally as the IJN anticipated. When this is taken into consideration, the ultimate benefit of the Pearl Harbor raid for Japan appears slim indeed.

¹¹⁵ Chihaya, "An Intimate Looks at the Japanese Navy," in *The Pearl Harbor Papers*, 322; Kusaka Ryunosuke, "*Rengo Kantai* (Combined Fleet), Extracts," in *The Pearl Harbor Papers*, 141.

¹¹⁶ On 7 December 1941, the USN Pacific Fleet possessed a total of 11 fleet oilers, two of which were at Pearl Harbor, and only four of which were capable of at-sea refueling; Donovan, "Oil Logistics in the Pacific War," 35.

Instead, at a stroke, Yamamoto united the American people—until Pearl Harbor, deeply divided with a large isolationist lobby—in total hatred against Japan. Nazi Germany then completed what Japan started, by declaring war on the United States a few days later. President Franklin D. Roosevelt was thus saved the trouble of having to drag a reluctant American nation into war with the Axis powers. For a man posterity has labeled an expert on the United States, Yamamoto's logic appears odd to say the least. In the end, it might be asked if the IJN might not have been better served by letting the U.S. battle fleet fight its way across the Pacific for a decisive engagement, in accordance with established prewar doctrine. The IJN's night combat groups certainly appear to have been up to the task of interdicting the USN in a fleet-wide night battle—had this been allowed to take place.¹¹⁷

Simultaneously with the First Air Fleet's attack on Pearl Harbor, the IJN launched its long-awaited southward advance, the ultimate goal of which was to secure the oil-rich regions of the Netherlands East Indies. Here, Japanese heavy cruisers distinguished themselves by playing a major part in the destruction of Allied naval power in the Far East. Within three months, the IJN had swept Allied warships from the South Seas, and secured naval dominance over the region. This enabled the Japanese amphibious landings to take place unhindered, and sealed the fate of the European colonial empires in the Far East. This included the capture of Singapore—the surrender of which on 15 February 1942 constituted the greatest humiliation in British military history. For Japan, the overriding objective of the first-stage operation was to secure what it called the southern resource area, which included above all Sumatra and Java, with landings in Malaya, Borneo, and the Celebes as preliminary operations. The Philippines was also slated for invasion, in order to secure the eastern flank of Japan's expanded empire. Burma was also to be

¹¹⁷ Asada, *From Mahan to Pearl Harbor*, 108; Donovan, "Oil Logistics in the Pacific War," 35–36; Fukudome, "The Hawaii Operation," in *The Japanese Navy in World War II*, 3–5; Stille, *Yamamoto Isoroku*, Loc. 40–44, 434–46.

occupied, and positions in the Central and South Pacific, namely in New Guinea, the Bismarck Archipelago, and the Marshall and Gilbert Islands, were to be consolidated in order to form an outer defense perimeter, to keep the Allies at arm's length from Japanese conquests.¹¹⁸

For the seizure of the southern resource area, the IJN called on 16 of its 18 heavy cruisers—as noted, *Tone* and *Chikuma* were with Vice Admiral Nagumo's First Carrier Fleet, which was roaming far and wide in distant support of the first-stage operation. Prospects for action occurred within days, when in response to Japanese landings in Malaya on 8 December the Royal Navy sortied Force Z, comprising battleship *Prince of Wales* and battlecruiser *Repulse*, escorted by four destroyers, from Singapore under the command of Admiral Sir Thomas Phillips. In the area providing cover for the Japanese landings was the Malaya Seizure Force, commanded by Vice Admiral Ozawa Jisaburo, which included *Chokai*, his flagship, and the four cruisers of *Sentai 7* (*Kumano*, *Suzuya*, *Mogami*, and *Mikuma*). Although the two fleets missed each other in the darkness on the night of 9–10 December, it is interesting to ponder the outcome of such an engagement. It is reasonable to believe that the British, though fairly accomplished night-fighters, and with bigger guns, would have been in for a rude shock in the face of Japanese torpedoes. Vice Admiral Ugaki Matome, the Combined Fleet's chief of staff, was keenly disappointed at the failure to force a night action, as he felt the IJN held a decisive advantage. In any event, on 10 December Japanese naval bombers flying from Indochina attacked Phillip's ships, and after an hour of bomb and torpedo attacks both *Prince of Wales* and *Repulse* were sunk.¹¹⁹

¹¹⁸ Gerhard L. Weinberg, *A World at Arms: A Global History of World War II* (New York: Cambridge University Press, 2005), 310.

¹¹⁹ Dull, *A Battle History of the Imperial Japanese Navy*, 36–40; Kondo Nobutake, "Some Opinions Concerning the War" in *The Pacific War Papers*, 307–09; Lacroix and Wells, *Japanese Cruisers of the Pacific War*, 295–96; Ugaki, *Fading Victory*, 46; van der Vat, *The Pacific Campaign*, 32–34.

The destruction of Force Z, coupled with the crippling of the American battleship fleet at Pearl Harbor, eliminated Allied capital-ship power from the South Pacific for the time being. In the Far East, only cruiser, submarine, and flotilla forces were left to stem the Japanese advance. In quick succession the objectives fell like dominoes: by the end of 1941, the Japanese were firmly entrenched on Malaya (and advancing on Singapore), Borneo, and the Philippines; though the IJN suffered a brief setback at Wake Island, elsewhere Allied land and naval forces were unable to contest the assaults.¹²⁰ Like Germany's Operation *Barbarossa*, the June 1941 invasion of the Soviet Union, the Japanese first-stage operation against the southern resource area was breathtaking in scope, but was also launched on a logistical shoestring. That Japan so rapidly succeeded in its objectives is remarkable, and as a military accomplishment was certainly every bit as blitzkrieg-like as those of its German ally. However, the Japanese were greatly helped by the Allies' dearth of resources in the theater, focused as the latter were on the war in Europe. In hindsight, it is obvious that the Japanese allowed these early successes to go to their heads, and this contributed at length to a catastrophic underestimation of Allied resolve. This hubris, popularly called "victory disease," came to haunt Japanese leaders within a few months, as their whirlwind advance was stopped cold, first at the Coral Sea, and then at Midway.¹²¹ First, however, the Allied agony continued.

By January 1942, Japan was poised for the most important phase of its first-stage operation: the seizure of the Netherlands East Indies. Here were the resources the Imperial Japanese war machine desperately needed, including rubber, tin, and oil. Meanwhile, the Allies attempted to reorganize in the face of heavy losses and the imminent Japanese attack on the East

¹²⁰ The IJN had to conduct two landing attempts at Wake Island; the second included heavy cruiser support from *Sentai 6 (Furutakas)* and *Sentai 8 (Tones)*; Dull, *A Battle History of the Imperial Japanese Navy*, 22–26.

¹²¹ Fuchida Mitsuo and Okumiya Masatake, *Midway: The Battle that Doomed Japan* (London: Hutchinson, 1957), 283–86.

Indies. That month they formed a new joint command for Allied forces in Southeast Asia. Known as ABDA (for American-British-Dutch-Australian), the command ultimately proved, in the words of historian Dan van der Vat, “much better at producing acronyms than scoring points off the rampaging Japanese.”¹²² ABDA’s naval contingent was initially led by an American, Admiral Thomas Hart, but he was in the middle of February replaced by Dutch Admiral Conrad Helfrich, probably because the Americans saw the writing in the cards and decided to let a Dutch commander take the fall. Helfrich’s commander afloat was the gallant Rear Admiral Karel Doorman, whose polyglot cruiser force was the only thing standing between the IJN and the Netherlands East Indies. The IJN encountered ABDA’s naval forces during the campaign in the Java Sea, in engagements which were devastating to the Allies.¹²³

The seizure of the East Indies began with Japanese landings on Dutch Borneo and the Celebes. This was the catalyst for several spirited destroyer actions off Borneo and Bali (east of Java). Though largely inconclusive, off Balikpapan in Dutch Borneo the USN achieved a modicum of success against Japanese amphibious shipping with four old destroyers. American and Dutch submarines also nibbled at the Japanese invasion convoys. However, nowhere did Allied efforts delay the Japanese juggernaut more than a day. By late February the Philippines was mostly secure, Singapore had surrendered, Nagumo’s First Air Fleet had wrecked Port Darwin in Australia, and Sumatra had been invaded. Japanese naval forces in the area now converged on the final objective of the Java Sea Campaign: the invasion of Java proper. Amazingly, the only damage suffered by the IJN’s heavy cruiser arm during this run of Japanese conquests was on 4 January, when eight U.S. Army Air Force B-17 heavy bombers raided the Japanese anchorage in Davao, on Mindanao in the southern Philippines. A single bomb struck

¹²² van der Vat, *The Pacific Campaign*, 125.

¹²³ *Ibid.*, 128.

Myoko, which suffered moderate damage, with 35 men killed and 29 wounded. She had to steam back to Sasebo in Japan for repairs, but would be back in the theater in time to participate in the 27 February–1 March Sea Battle off Surabaya.¹²⁴

By the end of February, ABDA was coming apart at the seams. The Dutch, their homeland under Nazi occupation, had by far the most to lose from a Japanese invasion of the East Indies, and understandably insisted on defending their colonial empire to the bitter end.¹²⁵ The outcome, however, was hardly in doubt. Admiral Helfrich's last line of defense was Rear Admiral Doorman's multinational cruiser-destroyer force. This was composed of American heavy cruiser *Houston* (whose after 8-in. turret was inoperable from Japanese bomb damage), British heavy cruiser *Exeter*, Dutch light cruisers *De Ruyter* (Doorman's flagship) and *Java*, Australian light cruiser *Perth*, along with four American, three British, and two Dutch destroyers. Doorman's ships were in disrepair, the crews were exhausted, morale was low, and unity of command was questionable. They had neither radar nor effective air cover, and had left their floatplanes behind in anticipation of a night battle. On 27 February, this forlorn hope sailed from Surabaya for the last time to do battle with the Japanese invasion fleet.¹²⁶

The Japanese assault on Java was a two-pronged affair, and comprised a western and an eastern invasion force. These contained 56 and 41 transports, respectively, and were screened by powerful cruiser and destroyer elements. Steaming 200 miles astern of the Eastern Java Invasion Force on the morning of 27 February were the heavy cruisers of *Sentai 5* (*Nachi* and *Haguro*), while the 41-ship convoy was screened by Destroyer Squadron 2 (light cruiser *Jintsu* and four

¹²⁴ Dull, *A Battle History of the Imperial Japanese Navy*, 42, 50, 62–63; Lacroix and Wells, *Japanese Cruisers of the Pacific War*, 296; van der Vat, *The Pacific Campaign*, 127.

¹²⁵ ABDA Command was dissolved on 25 February 1942, as Java's defense was placed in Dutch hands; Dull, *A Battle History of the Imperial Japanese Navy*, 72.

¹²⁶ Dull, *A Battle History of the Imperial Japanese Navy*, 72, 93; van der Vat, *The Pacific Campaign*, 130.

destroyers) and Destroyer Squadron 4 (light cruiser *Naka* and six destroyers).¹²⁷ The Japanese convoy—comprised of requisitioned merchant ships whose station keeping was poor—was strung out over a wide area of ocean, and the heavy cruiser group was almost out of mutual support range. When around noon a Japanese reconnaissance aircraft, flying from Borneo, reported the presence of Doorman's cruiser force 63 miles northwest of Surabaya, there was consternation on the Japanese side. It was not unwarranted; had Doorman struck the convoy the moment its position had been given to him (in the afternoon on the 27th), the Japanese may well have been caught flat-footed, with their heavy cruisers too far away to effectively intervene. Luckily for the Japanese, the Allies delayed long enough for Rear Admiral Takagi Takeo to bring up *Nachi* and *Haguro*, and place his units between Doorman and the eastern invasion force transports. The coming action would be the largest fleet engagement since the Battle of Jutland in 1916. While in gun power the two sides were fairly evenly matched—two heavy cruisers, three light cruisers, and nine destroyers on the Allied side, versus two heavy cruisers, two light cruisers, and fourteen destroyers on the Japanese side—the IJN held a decisive advantage in every other category; most of all in unity of command, air support, torpedo armament, crew morale, state of readiness, and night-fighting skill.¹²⁸

Shortly after the receipt of the reconnaissance aircraft's report, *Nachi* catapulted a floatplane to keep tabs on Doorman's whereabouts. While initially observed heading toward Surabaya, by 1700 (Tokyo time) it was clear to the Japanese that the Allies had reversed course to intercept the invasion force. At approximately 1721, the 2nd Destroyer Squadron, on a westerly heading, sighted Doorman's masts on the horizon to the south, about 20 miles away. The

¹²⁷ Japanese light cruisers were normally used as destroyer squadron leaders, as in this battle; Jentschura, Jung, and Mickel, *Warships of the Imperial Japanese Navy*, 105–09.

¹²⁸ Chihaya, "Account of the Battle of the Java Sea," in *The Pacific War Papers*, 272–74; Dull, *A Battle History of the Imperial Japanese Navy*, 74–78, 92–93; Hara, *Japanese Destroyer Captain*, 67–70; van der Vat, *The Pacific Campaign*, 130–31.

Japanese turned southwest to parallel the Allied force, to keep themselves between Doorman and the invasion transports. Meanwhile, *Sentai 5* and Destroyer Squadron 4 raced south to join forces. At 1747, *Nachi* and *Haguro* opened fire on the Allied column at a range of 20,000–25,000 meters. At around the same time, the entire Japanese force swung west, running parallel with Doorman who attempted to get at the Japanese transports by passing south of Takagi's screening formation. From 1747 to 1850 the two sides thundered away inconclusively at each other. Japanese prewar tacticians had placed great value on outranging and outgunning the enemy, but during the first phase of the Sea Battle off Surabaya the IJN disappointed. In the span of 57 minutes, *Haguro* and *Nachi* each expended about 800 20-cm shells, out of a total supply of 1,300 (60 percent of their ammunition), for only five hits. Allied long-range gunnery fared no better, but on balance it was the Japanese who made the worse impression, as they were not laboring under as many handicaps. As disturbingly for the Japanese, of the five hits, four were duds.¹²⁹ In any event, the single shell that did hit and explode did so with significant effect; this struck the British heavy cruiser *Exeter* at 1838 and exploded in her boiler room. The cruiser quickly lost speed and swung out of formation. This threw the Allied line into confusion, as many ships believed this to be a planned maneuver and followed suit.¹³⁰

The Japanese cruisers and destroyers also launched many torpedoes at the Allied line, and while the majority missed, at 1843 a Type 93 torpedo from *Nachi* (from a spread of eight) hit and sank the Dutch destroyer *Kortenaer*. The Allies, ignorant of the Type 93's capabilities, assumed the destroyer to have been the victim of a submarine attack; another Dutch destroyer even dropped depth charges. The loss of a destroyer and *Exeter*'s heavy damage compelled Doorman

¹²⁹ Dud shells were not an uncommon phenomenon in the IJN; the skipper of destroyer *Akigumo* noted in his war diary a disturbing percentage of such malfunctions; Chigusa Sadao, "Conquer the Pacific Ocean Aboard Destroyer *Akigumo*: War Diary of the Hawaiian Battle, in *The Pearl Harbor Papers*, 175–76.

¹³⁰ Lacroix and Wells, *Japanese Cruisers of the Pacific War*, 298; van der Vat, *The Pacific Campaign*, 131.

to temporarily withdraw to the south and east. However, battle was soon rejoined as the determined Allies sought a way to get around Takagi and get at the invasion transports, now approximately 30 miles to the north.¹³¹ With the approaching darkness the Japanese flair for night-combat came into its own, and Doorman's force suffered heavy losses. After a valiant but doomed charge toward the Japanese line (to take the pressure off the damaged *Exeter*), the British destroyer *Electra* was sent to the bottom in return for damage to the Japanese destroyer *Asagumo*. Doorman repeatedly tried to circumvent Takagi, but every time the Japanese frustrated his designs by keeping between him and the transports. While maneuvering for position, the luckless Allies blundered into a recently laid Dutch minefield, and another destroyer, the British *Jupiter*, blew up and sank.¹³²

Undeterred, Doorman altered course once more and resumed his hunt for the transports. Takagi, anticipating that the Allies might make another attempt to outflank him, did not aggressively pursue the Allied force, but instead focused on keeping his units between Doorman and the transports.¹³³ While timidity characterized Japanese naval leadership throughout the Pacific War, it would be mistaken to berate Takagi in this case for not pursuing the Allied force more aggressively. Takagi's overriding responsibility was the safety of the 41 transports of the Eastern Java Invasion Force, and the Japanese admiral undoubtedly made the right choice by maintaining a defensive mindset. For the IJN, in this engagement—unlike many which were

¹³¹ Takagi had some very uncomfortable moments, when Doorman's ships unexpectedly reappeared while *Sentai 5* was recovering its floatplanes; luckily for the Japanese, the Allied force did not press the attack against the heavy cruisers; Hara, *Japanese Destroyer Captain*, 74–75.

¹³² Dull, *A Battle History of the Imperial Japanese Navy*, 78–84; Lacroix and Wells, *Japanese Cruisers of the Pacific War*, 298; van der Vat, *The Pacific Campaign*, 131; F. C. van Oosten, "Fall of the Dutch East Indies," in *History of the Second World War*, ed. B. H. Liddell Hart (London: Phoebus Publishing, 1966), 851–52.

¹³³ According to Chihaya Masataka's 1947 post-war account of the battle, Takagi did not press his pursuit out of concern for Allied mines and submarines; his caution appears to have been warranted when considering the fate of the British destroyer *Jupiter*; Chihaya, "Account of the Battle of the Java Sea," in *The Pacific War Papers*, 275.

fought later—discretion was the better part of valor.¹³⁴ In any case, the two opponents soon sighted one another again; the Allies heading north, the Japanese south. The running battle continued as Takagi reversed course and ran parallel to Doorman's ships. At approximately 0052, *Haguro* and *Nachi* launched another salvo of torpedoes—of four and eight Type 93s, respectively—at the Allied column, now about 10,000 meters away. 15 minutes later, disaster struck Doorman's force. *Sentai 5*'s torpedoes hit and sank the Dutch admiral's flagship, *De Ruyter*, as well as her consort the *Java*, with heavy loss of life, including Doorman's. The admiral's last command to what was left of his force, now effectively reduced to *Houston* and *Perth* (the other ships having already retired), was to continue to Batavia and not stop to pick up survivors. The wounded *Exeter* was intercepted the following day, 1 March, and sunk with gunfire and torpedoes, along with two destroyer consorts. In on this kill were *Sentai 5*'s sister ships, *Ashigara* and *Myoko*, the latter which had been repaired after the American air raid on Davao. All told, the Japanese landings on Java were delayed by less than one day.¹³⁵

The Allies suffered one heavy cruiser, two light cruisers, and three destroyers lost in return for moderate damage to a single IJN destroyer. Nonetheless, Rear Admiral Karel Doorman deserves praise for his determined and aggressive conduct, which was in full keeping with the traditions of the Royal Dutch Navy. Doorman remains one of the most impressive of the Allied command personalities from this low-point in Allied fortunes, and displayed a level of courage and determination notably lacking in many of his Allied peers. Dutch naval vessels proudly carry his name to this day.

¹³⁴ According to Hara's memoirs, this did not save Takagi from scorn and criticism, and he was later sent to command a submarine fleet; this seems curious when one considers how long the vacillating and timid Nagumo remained in command of the carrier fleet after Pearl Harbor and Midway; Hara, *Japanese Destroyer Captain*, 78.

¹³⁵ Chihaya, "Account of the Battle of the Java Sea," in *The Pacific War Papers*, 275–77; Dull, *A Battle History of the Imperial Japanese Navy*, 84–88; Hara, *Japanese Destroyer Captain*, 77–78; Ugaki, *Fading Victory*, 96.

The IJN's defeat of Doorman's cruiser force sealed the fate of Java. The battle confirmed the skill of Japanese heavy cruiser crews, and even though their long-range gunnery in the opening phase of the battle disappointed, this probably had more to do with the unreasonable expectations of prewar tacticians than lack of skill on the part of the vessel crews.¹³⁶ Long-range surface warship gunnery duels in World War II tended to be inconclusive affairs, due to the low percentage of hits—one notable exception being the German battleship *Bismarck*'s destruction of the British battlecruiser *Hood* in 1941. While few of the torpedoes fired by the Japanese in the battle hit targets—again because of the long range—those that did so decisively altered the course of the engagement. The Sea Battle off Surabaya confirmed the prewar wisdom of equipping heavy cruisers with long-range torpedoes, despite the risks this posed. On the other hand, in subsequent heavy cruiser night actions, gunnery would play a much greater part.¹³⁷

In the wake of the Sea Battle off Surabaya, the shattered remnants of Allied naval power in the Far East tried to make for friendly ports. This served as the catalyst for the Sea Battle off Batavia, the last cruiser action of the Java Sea Campaign. After disengaging from Takagi's force, U.S. heavy cruiser *Houston* and Australian light cruiser *Perth* headed south and then west along the north coast of Java. Their goal was to evade the Japanese and head first to Batavia for refueling, then on to Tjilatjap on the south coast, by way of the Sunda Strait (which separates Sumatra and Java). However, this brought the ill-fated squadron into contact with the Western Java Invasion Force of 56 transports and a powerful cruiser and destroyer screen. The Japanese

¹³⁶ This did not prevent Vice Admiral Ugaki from reflecting disappointment in his diary at the Japanese gunnery in the battle; Ugaki, *Fading Victory*, 106.

¹³⁷ Mark Stille, *The Naval Battles for Guadalcanal 1942: Clash for Supremacy in the Pacific* (Oxford: Osprey Publishing, 2013), Loc. 823–27.

transports began landing troops on the evening of 28 February, at the same time the Allies sortied from Batavia.¹³⁸

As they rounded Babi Island at the northeast entrance to the Sunda Strait just after midnight on 1 March, the two cruisers encountered Japanese transports unloading between Padjang Island and the Java mainland. As in the engagement off Surabaya, the Japanese screening forces were widely dispersed, and the only Japanese warships in the immediate vicinity were two heavy destroyers. *Houston* and *Perth* raced toward the anchored transports, guns blazing, while the two Japanese destroyers dodged to and fro in a frantic attempt to protect their charges. Meanwhile, the heavy cruisers *Mikuma* and *Mogami* of *Sentai 7*, who were 14 miles to the northwest, set course for the anchorage at maximum speed. They were supported by light cruiser *Natori* and another seven destroyers. Shortly after 0100, the Japanese forces converged on the anchorage, and the *Houston* and *Perth*'s fate was sealed. Between them, the two IJN heavy cruisers fired 18 torpedoes at the Allied ships at a range of approximately 9,000 meters. Missing its intended victims, *Mogami*'s second six-torpedo salvo instead ran into the Japanese anchorage, and a minesweeper and four transports were sunk. In any case, the overwhelmed *Perth* and *Houston* both succumbed to gunfire and torpedoes and sank shortly thereafter, at 0142 and 0206, respectively. Once again Japanese night-fighting skill had triumphed, although it is important to note that, once they were able to concentrate their forces, the IJN possessed an overwhelming superiority. Furthermore, the Japanese victory in the Sea Battle off Batavia was marred by *Mogami*'s unintentional torpedoing of friendly transports; a definite risk of using long-range torpedoes in restricted waters with many friendly ships.¹³⁹

¹³⁸ Chihaya, "Account of the Battle of the Java Sea," in *The Pacific War Papers*, 277; Dull, *A Battle History of the Imperial Japanese Navy*, 88; Hara, *Japanese Destroyer Captain*, 76–77.

¹³⁹ Chihaya, "Account of the Battle of the Java Sea," in *The Pacific War Papers*, 277–78; the culprit of this friendly-fire incident was originally thought to be the destroyer *Fubuki*, but subsequent research places the blame on

As the first-stage operation was being concluded, Japanese planners debated on where to strike next. There were essentially three schools of thought: one advocated a thrust into the Indian Ocean, to deny Great Britain the use of India and to linkup with Axis forces in the Middle East, another supported further advances in the South Pacific, to isolate Australia and deny its use as a springboard for an Allied counteroffensive, and a third group argued for seeking a decisive battle in the Central Pacific, to destroy the remnants of American naval power (particularly the aircraft carriers). Instead of concentrating fully on one objective, the Japanese tried all three in succession. This dispersal of effort reflected Japanese inter-service disharmony and lack of strategic foresight and planning, and was a contributory factor in America's ability to check the Japanese advance, and go on the counteroffensive during the second half of 1942.¹⁴⁰

Between the end of the Java Sea Campaign in March and the beginning of the Solomons Campaign in August, the IJN's heavy cruiser arm served in a variety of important support roles, especially in carrier operations, as there were no direct cruiser clashes with Allied forces during this period. To conclude the first-stage operation, the IJN in April mounted a large-scale raid into the Indian Ocean, known as the C Operation. Here, in one of the very few instances in World War II, Japanese heavy cruisers engaged in commerce raiding.¹⁴¹ Conducted in the Bay of Bengal—while Vice Admiral Nagumo's First Air Fleet swept into the Indian Ocean proper and struck at British ships and bases in Ceylon—the sortie met with some success. Commanded by Vice Admiral Ozawa Jisaburo, the Second Southern Expeditionary Fleet included *Chokai* and the four ships of *Sentai 7* (*Mikuma*, *Mogami*, *Kumano*, and *Suzuya*), along with the light carrier *Ryujo*, light cruiser *Yura*, and four destroyers. *Chokai*, *Yura*, and *Ryujo* operated in the central

Mogami; Dull, *A Battle History of the Imperial Japanese Navy*, 88–92; Hara, *Japanese Destroyer Captain*, 77; Lacroix and Wells, *Japanese Cruisers of the Pacific War*, 486–87.

¹⁴⁰ Ugaki, *Fading Victory*, 68–69; Weinberg, *A World at Arms*, 323–24.

¹⁴¹ *Sentai 4* (*Atago*, *Takao*, and *Maya*) also conducted a brief raiding sortie south of Java between 2 and 5 March 1942; Lacroix and Wells, *Japanese Cruisers of the Pacific War*, 299.

Bay of Bengal, while *Sentai 7* was split into a northern and southern group with two cruisers each. The objective of the Japanese was to keep pressure on the British and undermine colonial authority in India. During 5 and 6 April, Ozawa's force accounted for 76,834 gross tons of Allied shipping (16 vessels), while Japanese submarines accounted for another 32,404 gross tons.¹⁴²

After Nagumo's Indian Ocean raid, the Japanese shifted their attention to the Coral Sea and the MO Operation: the invasion of Port Moresby in New Guinea. Here, the first major carrier clash of the Pacific War took place on 4–8 May 1942. During the engagement, which resulted in the loss of one large American carrier (*Lexington*) and one small Japanese carrier (*Shoho*), *Sentai 6* (*Aoba*, *Kako*, *Kinugasa*, and *Furutaka*) supported the Port Moresby Invasion Force, while *Myoko* and *Haguro* from *Sentai 5* accompanied the Carrier Strike Force.¹⁴³ When the USN disrupted the Japanese timetable and damaged the IJN carrier force, Vice Admiral Inoue Shigeyoshi, the overall commander, called off the operation and beat a hasty retreat. Inoue's timidity was notable. Though his fleet carriers *Shokaku* and *Zuikaku* were damaged, the two had done greater damage to the enemy; Inoue withdrew his ships even though the U.S. force was down to one damaged carrier, the *Yorktown*, and in no condition to interfere had the Japanese chosen to proceed with the invasion as planned.¹⁴⁴ The Japanese were hampered by poor reconnaissance during the battle, which, as noted, placed too much emphasis on cruiser floatplanes, and not enough on the carriers' own air component. This was a foretaste of far worse

¹⁴² This figure, tabulated from Lacroix and Wells, varies somewhat from that provided by Ohmae; Dull, *A Battle History of the Imperial Japanese Navy*, 104, 110–11; Lacroix and Wells, *Japanese Cruisers of the Pacific War*, 299–300, 487; Ohmae Toshikazu, "Japanese Operations in the Indian Ocean," in *The Japanese Navy in World War II*, 109–10, 113.

¹⁴³ The Carrier Strike Force for the MO Operation was commanded by Vice Admiral Takagi, of Java Sea fame; Dull, *A Battle History of the Imperial Japanese Navy*, 118–19, 129; Lacroix and Wells, *Japanese Cruisers of the Pacific War*, 301.

¹⁴⁴ Inoue harbored overblown concerns about Allied land-based airpower, even though he believed both U.S. carriers had been sunk, and *Zuikaku* was capable of flight operations; Dull, *A Battle History of the Imperial Japanese Navy*, 128.

things to come. Once again, a Japanese admiral—partly from lack of timely information—hesitated from committing his forces decisively, and denied the IJN a strategic victory.¹⁴⁵

Following the suspension of the MO Operation, Japanese attention shifted yet again, this time to the Central Pacific and the destruction of the USN carrier fleet, which since Nagumo's flawed victory at Pearl Harbor had been Admiral Yamamoto's overriding goal. The Combined Fleet commander's plan—the MI Operation—was deeply flawed both in conception and execution, and, as in earlier engagements, was characterized by a dispersal of effort.¹⁴⁶ Coupled with American foreknowledge of the attack on Midway (from their reading of the Japanese naval cipher, code-named JN25), and shoddy Japanese reconnaissance on the day in question, the Midway operation courted disaster. During the battle's climax on 4 June, Nagumo's First Air Fleet lost all four of its carriers present—*Akagi*, *Kaga*, *Soryu*, and *Hiryu*. Even with the American loss of *Yorktown*, it was a stunning blow that, at a stroke, ended the Japanese advance in the Pacific.¹⁴⁷

Being a fleet-wide sortie, the IJN's heavy cruiser arm was out in force for the MI Operation. *Nachi*, *Maya*, and *Takao* were assigned to the northern secondary AL Operation to seize islands in the Aleutians chain. *Atago*, *Chokai*, *Myoko*, *Haguro*, *Kumano*, *Mogami*, *Mikuma*, and *Suzuya* provided cover for the Midway invasion force, including 15 transports with 5,000 troops, which never got near the island. The Japanese fleet was scattered over thousands of square miles of ocean; Yamamoto's main body of battleships, for example—which were supposed to deliver the coup de grâce to the USN Pacific Fleet—steamed 500 nautical miles

¹⁴⁵ Dull, *A Battle History of the Imperial Japanese Navy*, 122, 128–30; Vice Admiral Ugaki expressed disappointment in his diary at Inoue's premature withdrawal; Ugaki, *Fading Victory*, 122–25.

¹⁴⁶ This was at odds with Mahan's dictum to always concentrate the fleet for a decisive battle; in the 1666 Four Days' Battle between the English and Dutch fleets, the former, by splitting their forces against divergent strategic objectives, enabled the Dutch to destroy the fleet opposing them; Mahan, *The Influence of Sea Power Upon History*, 114–15.

¹⁴⁷ van der Vat, *The Pacific Campaign*, 178–80; Weinberg, *A World at Arms*, 335–38.

behind Nagumo during the battle, and were thus well out of mutual support range of the Carrier Fleet. *Sentai 8's Tone* and *Chikuma*, however, were in the thick of the action alongside Nagumo's carriers. On the morning of 4 June (5 June for the Japanese, on Tokyo time), Nagumo launched an air strike at Midway to draw the Americans out from Pearl Harbor—oblivious to the fact that three U.S. carriers were actually lying in ambush northeast of the island. Japanese air reconnaissance was leisurely at best—the planners convinced that the U.S. carriers were nowhere near Midway—and depended on a simple single-phase search, in which one plane flies one search line. This was conducted by two Type 0 floatplanes each from *Tone* and *Chikuma*, one old, short-range Type 95 from the accompanying battleship *Haruna*, and just two Type 97 carrier attack planes (torpedo bombers) from the carrier *Akagi*.¹⁴⁸

Not only was the Japanese air search dangerously incomplete; it was hampered by bungling, technical problems, and oversights. For one reason or another, the launch of *Tone's* second scout plane was delayed by half an hour, and no replacement was immediately dispatched. Meanwhile, one of *Chikuma's* planes turned back early because of bad weather, while the other apparently managed to fly right over the American task force without sighting it. Eventually, *Tone's* delayed second aircraft spotted the Americans, but to compound the situation, its pilot issued frustratingly vague contact reports which wasted precious time. While the faulty Japanese air reconnaissance on 4 June cannot bear sole blame for the IJN's catastrophic defeat, it was a major contributory factor. Shortcomings in IJN doctrine and leadership placed excessive dependence on the cruisers' modest floatplane contingent. The USN's large PB-Y Catalina reconnaissance flying boats alone outnumbered the seven Japanese scouting planes that morning

¹⁴⁸ Agawa, *The Reluctant Admiral*, 316; Dull, *A Battle History of the Imperial Japanese Navy*, 139–41; Lacroix and Wells, *Japanese Cruisers of the Pacific War*, 302, 487; the IJN would not begin to employ two-phase search patterns (in which two planes fly the same search line, at specified intervals) until May 1943, after costly lessons at Midway and in the Solomons; Parshall and Tully, *Shattered Sword*, 107–08.

by four to one. In any case, though perhaps victims of unreasonable expectations, the cruisers and aircraft of *Sentai* 8 failed in their task at the Battle of Midway.¹⁴⁹

To add insult to injury, while withdrawing from Midway on the night of 4–5 June, the heavy cruisers *Mogami* and *Mikuma* collided while performing evasive maneuvers after *Kumano*, the *Sentai* 7 flagship, spotted a surfaced American submarine to starboard and ordered an emergency 45 degree turn to port. *Suzuya* and *Mogami*, the second and fourth ship in the line, correctly acknowledged the order, but *Mikuma*, the third ship, mistakenly made a 90 degree turn. *Mogami*, bringing up the rear, rammed her sister. The two damaged ships limped along and came under repeated attacks from vengeful American dive bombers from the carriers *Enterprise* and *Hornet*. While *Mogami* escaped, *Mikuma* succumbed to the collision and bomb damage and sank after sunset on 6 June. *Mogami* suffered 90 men killed and 101 wounded, while the doomed *Mikuma* suffered more than 650 dead. She was the first Japanese heavy cruiser lost in the war.¹⁵⁰

After the Midway debacle, Japanese planners toyed with the idea of converting their battleships and cruisers to aircraft carriers. The IJN as a body, it seems, had finally awoken to the value of carrier airpower over the big guns of battleships. Studies undertaken to explore the feasibility of such a scheme concluded that the modification of the heavy cruisers to light carriers would take about nine months, after which they would be able to carry just 30 aircraft. While two old battleships, *Ise* and *Hyuga*, were ultimately converted into hybrid battleship-carriers (of dubious utility), the planners concluded that the heavy cruisers were too valuable as surface

¹⁴⁹ Parshall and Tully, *Shattered Sword*, 107–12, 132–33, 146–48, 159–61, 163–64.

¹⁵⁰ In desperation after the loss of his carriers, Yamamoto tried to force a night engagement and bombardment of Midway Island with his cruisers and battleships, but the Americans were not foolish enough to be drawn into such an action, and kept their forces out of reach; Dull, *A Battle History of the Imperial Japanese Navy*, 163–66; Lacroix and Wells, *Japanese Cruisers of the Pacific War*, 487–88.

warships, and the plan was dropped. This was fortunate for the Japanese, considering the importance the heavy cruisers were to play in the upcoming Solomons Campaign.¹⁵¹

At the same time, the fleet was reorganized to place greater emphasis on the aircraft carrier as the new centerpiece of naval power. The defunct First Air Fleet was disbanded and renamed Third Fleet. The Second Fleet, at the start of the war known as the Heavy Cruiser Force or Scouting Force, was redesignated the Vanguard Force. Steaming 100–200 miles ahead of the carriers in an advanced screening role, the Vanguard Force doubled as a follow-up Night Battle Force, to finish off damaged enemy ships, after the carriers had crippled the opponent fleet. Though heavy on firepower, the Vanguard Force, unlike the pickets assigned to USN carrier task forces, was hampered by a lack of reliable radar, which ultimately reduced its effectiveness as a screening unit. Utilized in the Solomons Campaign's two major carrier clashes (on 24 August and 26 October 1942), the Vanguard Force, commanded by Vice Admiral Kondo Nobutake and including *Sentai* 4, 5, 7 and 8, failed to bring on night engagements because the U.S. carrier fleets withdrew out of range after the main action. In her role as carrier escort, the *Chikuma* suffered moderate damage from American dive bombers during the 26 October South Pacific Ocean Sea Battle (Battle of the Santa Cruz Islands).¹⁵²

Japan's setback at Midway left the initiative in the hands of the United States, which wasted little time in scraping together an expeditionary force and going on the offensive. On 7 August 1942, U.S. Marines waded ashore on the islands of Guadalcanal and Tulagi, and the Solomons Campaign began. Its Guadalcanal phase, though decided by the end of 1942, lasted

¹⁵¹ Jentschura, Jung, and Mickel, *Warships of the Imperial Japanese Navy*, 26–28; Lacroix and Wells, *Japanese Cruisers of the Pacific War*, 303, 305–06.

¹⁵² Dull, *A Battle History of the Imperial Japanese Navy*, 202, 204, 232; Kondo, "Some Opinions Concerning the War" in *The Pacific War Papers*, 314–15; Lacroix and Wells, *Japanese Cruisers of the Pacific War*, 294, 304, 307–08, 310–11, 488–89, 528–30; Ozawa, "Fleet Organization," in *The Pacific War Papers*, 82–84; Ozawa, "Outline Development of Tactics and Organization of the Japanese Carrier Air Force," in *The Pacific War Papers*, 79–80; Jonathan B. Parshall, "Ignoring the Lessons of Defeat," *Naval History* 21, no. 3 (June 2007): 32–33.

until February 1943, and took a dreadful toll on Japanese and Allied vessels and crews. The Solomons Campaign was in many ways as decisive to the Pacific War's outcome as the Battle of Midway. It was the first American offensive of World War II, and its sharp defeat could have had significant implications for the Allied war effort. At the very least, it would have prolonged the Pacific War, and the suffering of millions of affected people. At worst, it may have compromised President Roosevelt's Germany-first strategy, and had far-ranging consequences for the Allies as a result. Guadalcanal was the first painful step in the Allied re-conquest of the Pacific; it was also the first sure sign that the conflict had become a total war of attrition, which Japan, with its meager resources, could not possibly win. Although current events had clearly demonstrated that carrier aviation was the new arbiter of naval warfare, in the restricted waters around Guadalcanal the big guns of battleships and cruisers once more became priceless assets to both sides, as they fought savage, impersonal battles at close range in the humid South Pacific night.¹⁵³

The Japanese, hamstrung by characteristically paltry intelligence on Allied intentions in the region, woke up late to the significance of the American landings.¹⁵⁴ The net result of this oversight was that they fed reinforcements piecemeal into the battle. This was a critical mistake, as only a determined, all-out effort in the initial stages of the campaign could have—and most likely would have—ejected the Marines from Guadalcanal, and inflicted on the Allies in the Pacific a humiliating defeat. By fighting escalating naval engagements in the Solomons, Yamamoto, the Combined Fleet commander in chief, obliged the Americans to a grinding campaign of attrition, which gave the USN all the advantages in the long run. After Midway, believing there was no immediate threat of an American offensive, the Japanese leadership

¹⁵³ Weinberg, *A World at Arms*, 339, 341–42.

¹⁵⁴ The Japanese did not give Guadalcanal's recapture priority over all other South Pacific operations until 18 September; Dull, *A Battle History of the Imperial Japanese Navy*, 194, 211.

returned to plans for another foray into the Indian Ocean. These plans were abruptly shelved when the Americans established themselves on Guadalcanal.¹⁵⁵

The Americans possessed air superiority during the campaign, by virtue of their capture and tenuous hold on Guadalcanal's Henderson Field—an airstrip named after a U.S. pilot killed at Midway. The IJN, however, held a tactical edge in night combat. The five surface actions off Guadalcanal largely decided the outcome of the campaign; while the USN narrowly triumphed at the Sea Battle off Savo Island (Battle of Cape Esperance) and the second phase of the Third Battle of the Solomon Sea (Battle of Guadalcanal), the other three—The First Battle of the Solomon Sea (Battle of Savo Island), the first phase of the Third Battle of the Solomon Sea, and the Battle of Lunga Point (Battle of Tassafaronga)—tactically belonged to the IJN's finely honed night-fighters. Besides conducting shore bombardment missions against Henderson Field, and escorting troop convoys and carrier forces, IJN heavy cruisers played central roles in the First Battle of the Solomon Sea and the Sea Battle off Savo Island.

Considered somewhat of a backwater, the only substantial units the IJN possessed in the area when the Americans landed on 7 August were those of the Eight Fleet, Outer South Seas Force, based at Rabaul in New Britain. Commanded by Vice Admiral Mikawa Gunichi, it was a scratch force composed of Mikawa's flagship, *Chokai*, along with *Sentai 6* (*Aoba*, *Kako*, *Kinugasa*, and *Furutaka*), light cruisers *Tenryu* and *Yubari*, and the single, elderly destroyer *Yunagi*. Mikawa, however, wasted no time in striking at the American bridgehead. Ohmae Toshikazu called Mikawa “a gentle, soft spoken man and an intelligent naval officer of broad

¹⁵⁵ Ohmae, “Japanese Operations in the Indian Ocean,” in *The Japanese Navy in World War II*, 116–18; Ugaki, *Fading Victory*, 170, 173–74, 177; Weinberg makes an interesting case for the campaign's importance to the course of World War II: by pinning the Japanese down in the South Pacific at a critical moment in the war, the Allies thwarted another offensive into the Indian Ocean, which in turn prevented a possible Axis link-up in the Middle East; Weinberg, *A World at Arms*, 339, 342, 344–48.

experience . . . recognized for his judgment and courage.”¹⁵⁶ On the night of 8–9 August 1942, the gentle and soft spoken Mikawa inflicted on the USN one of its most humiliating defeats ever suffered in an equal contest. At 1430 (Tokyo time) on 7 August, “a fine clear day, the sea like a mirror,” *Chokai* departed Rabaul with her light cruiser and destroyer consorts; three hours later, the ships joined up with *Sentai 6*, and the combined force set course for Guadalcanal.¹⁵⁷

The coming engagement would be a true test of Japanese night-fighting doctrine. As opposed to the sea battles of the Java Sea Campaign, the IJN would now be up against forces equal, if not superior, in numbers, with ships whose crews were high in morale and full of fight. Furthermore, given the improvised nature of Mikawa’s command, the Eight Fleet’s ships had never before operated together. Each of his cruiser commanders was a skilled veteran, however, and Mikawa was confident of victory as long as he could avoid the attention of the U.S. carriers he knew to be in the area, as well as the shoals and reefs dotting the seascape on the approach to Guadalcanal.¹⁵⁸ Eschewing the more complex prewar tactical formation, Mikawa arrayed his ships in a long, single column, as they approached the Allied cruiser force screening the American landings after dark on 8 August.¹⁵⁹ Mikawa, in full keeping with a service modeled on the Royal Navy, sent aloft a Nelsonian signal to all ships: “In the finest tradition of the Imperial Navy we shall engage the enemy in night battle. Every man is expected to do his utmost.”¹⁶⁰ At 1630 each ship jettisoned onboard flammables, and at 2110 the cruisers’ floatplanes were sent aloft for tactical reconnaissance and to drop flares over the target area. The cruisers’ whipping

¹⁵⁶ Ohmae, “The Battle of Savo Island,” in *The Japanese Navy in World War II*, 215.

¹⁵⁷ Dull, *A Battle History of the Imperial Japanese Navy*, 184–85; Ohmae, “The Battle of Savo Island,” in *The Japanese Navy in World War II*, 224–25, 227.

¹⁵⁸ U.S. Vice Admiral Frank Fletcher, hero of Midway, was in the area with Task Force 61 (*Saratoga*, *Enterprise* and *Wasp*); however, unbeknownst to the Japanese, he had withdrawn his ships from the area on the evening of 8 August; Frank, *Guadalcanal*, 93–94.

¹⁵⁹ Prewar *yasengun* tactics called for ships to deploy in several parallel columns, with a destroyer vanguard ahead (see Chapter I, p. 36); Mahnken, “Asymmetric Warfare at Sea,” 101.

¹⁶⁰ Frank, *Guadalcanal*, 89; Ohmae, “The Battle of Savo Island,” in *The Japanese Navy in World War II*, 231.

battle ensigns were joined aloft by white streamers, 7 meters long, placed on each end of the main yardarm for recognition purposes.¹⁶¹

Allied aerial reconnaissance, for various reasons, abjectly failed to provide the U.S. admiral in command of the landing forces, Richmond Kelly Turner, with timely information on the approaching Japanese cruiser force. The Allied cruiser force screening the transports was literally caught napping, with the ships at normal steaming conditions, and their commanding officers sound asleep in their bunks. Widely dispersed in two groups on either side of Savo Island (off Guadalcanal's northwest coast), the Allied force cruised leisurely to and fro, while two radar-equipped picket destroyers guarded the approaches west of the two groups. The Allied Southern Group was composed of Australian heavy cruisers *Australia* and *Canberra*, U.S. heavy cruiser *Chicago*, and two destroyers. The Northern Group was made up of U.S. heavy cruisers *Vincennes*, *Quincy*, and *Astoria*, with another two destroyers. *Australia* missed the engagement as she had left the area with the cruiser force commander, Rear Admiral Victor Crutchley, Royal Navy, for a conference with Rear Admiral Turner. Captain Howard Bode of the *Chicago* was left in command of the Southern Group; a fact of which the commander of the Northern Group, Captain Frederick Riefkohl of the *Vincennes*, was unaware. As Mikawa approached, the Allied defense of the Guadalcanal landing area was fatally compromised.¹⁶²

Amid sporadic rain squalls in the humid night, at 2243 *Chokai*'s keen-eyed lookouts spotted the U.S. destroyer pickets, before the radar-equipped Americans had any idea the Japanese were present. Mikawa, slipping deftly by the pickets without alerting them, held his fire

¹⁶¹ Frank, *Guadalcanal*, 89; Ohmae, "The Battle of Savo Island," in *The Japanese Navy in World War II*, 225–27, 231.

¹⁶² Frank, *Guadalcanal*, 90–93, 96–101.

for larger game.¹⁶³ Approaching between Guadalcanal and Savo Island so as to round the latter in a clockwise fashion, the Japanese approached the Southern Group. Shortly after 2330, a parachute flare dropped from one of the floatplanes illuminated the hapless *Canberra* and *Chicago*, which were immediately taken under gun and torpedo fire. *Canberra* was disabled within minutes by multiple direct 20-cm hits—and possibly a torpedo—while another torpedo slammed into *Chicago*'s bow. A third “fish” also struck *Chicago* in the engine spaces, but proved a dud which probably saved the ship. The Japanese had demolished the Southern Group in about seven minutes.¹⁶⁴

With *Canberra* dead in the water and the crippled *Chicago* staggering off westward out of the battle area, Mikawa moved on and soon came into contact with the Northern Group. Amazingly, its three cruisers were as oblivious as the Southern Group had been; the flashes of gunfire on the horizon had failed to alert them, as had *Chicago*, whose radio equipment was fully functional, but inexplicably remained silent.¹⁶⁵ While maneuvering northeast to engage the Northern Group, Mikawa's ships unintentionally separated into two formations; the first was composed of *Chokai*, *Aoba*, *Kako*, and *Kinugasa*, while the other comprised *Furutaka* and light cruisers *Tenryu* and *Yubari* (destroyer *Yunagi* had been left behind to guard Mikawa's line of retreat). At approximately 2350, *Chokai*'s searchlights snapped open and bathed the Northern Group in light. Captain Riefkohl, commanding the Northern Group, believed this was the Southern Groups' doing, until Japanese shells began falling among his ships a few moments later. The range was just 7,000 meters, and closing rapidly. Japanese gunnery was deadly

¹⁶³ Japanese lookouts defeated U.S. electronics more than once off Guadalcanal; American fatigue, lack of night-fighting doctrine, and overreliance on technology—along with the interference from landmasses and squalls on early radar sets—were largely to blame; Frank, *Guadalcanal*, 103; Mahnken, “Asymmetric Warfare at Sea,” 114–15.

¹⁶⁴ Frank, *Guadalcanal*, 103–06; Ohmae, “The Battle of Savo Island,” in *The Japanese Navy in World War II*, 232–35.

¹⁶⁵ USS *Chicago*, “Report of Action Against Enemy Forces August 9, 1942, Guadalcanal-Tulagi Area, pp. 2–6,” Fold3: Historical Military Records: World War II War Diaries, http://www.fold3.com/browse.php#251|hsEUS91ace3dO_-Sj (accessed 20 September 2015).

accurate; again and again their salvoes struck the American cruisers. The only Allied ship to distinguish herself in the eyes of the Japanese that night was *Quincy*. Her return fire struck *Chokai* in the operations room abaft the bridge, narrowly missing Mikawa. Another hit from *Astoria* knocked out *Chokai*'s forward 20-cm turret. 34 men were killed. It was the most serious damage inflicted on the Japanese force during the battle.¹⁶⁶

By 0030, it was all over. As Mikawa's force steamed north out of the battle area, it left behind a scene of devastation. *Canberra* was reduced to a flaming wreck, and was scuttled during the morning. *Chicago* narrowly escaped destruction to spend months in a shipyard. Her skipper, Captain Bode, later committed suicide. Japanese gunfire and torpedoes left the cruisers *Vincennes*, *Quincy*, and *Astoria* of the Northern Group sunk or sinking. 1,077 Allied sailors were killed. Mikawa's night-fighters had presented Japan with a priceless opportunity; the defenseless transports unloading at Guadalcanal. In one blow, Mikawa could likely have stopped the first American offensive of World War II dead in its tracks. However, content with their stunning tactical victory, the Japanese elected to withdraw. This decision may have been justified given what Mikawa knew at the time, but the fact remains that at the First Battle of the Solomon Sea the Japanese missed an opportunity they would never have again—to end American ambitions in the Solomons at a stroke. As if to emphasize the bittersweet nature of the Japanese victory, while returning to Kavieng on New Ireland after the battle, *Kako* was sunk on the morning of 10 August by the U.S. submarine *S-44*. 71 men went down with the ship.¹⁶⁷

¹⁶⁶ Frank, *Guadalcanal*, 108–12; Lacroix and Wells, *Japanese Cruisers of the Pacific War*, 306–07; Ohmae, “The Battle of Savo Island,” in *The Japanese Navy in World War II*, 233, 235, 236–37.

¹⁶⁷ Frank, *Guadalcanal*, 117–23; Lacroix and Wells, *Japanese Cruisers of the Pacific War*, 307; Ohmae, “The Battle of Savo Island,” in *The Japanese Navy in World War II*, 239, 241; USS *S-44* (SS-155), “Report of Third War Patrol, 23 July–23 August 1942, pp. 8–9,” Fold3: Historical Military Records: World War II War Diaries, <http://www.fold3.com/browse.php#251|hDLoSNLEAA8fArOOViLCGbMfH> (accessed 20 September 2015).

Several considerations influenced Mikawa's decision to withdraw. While his force still had approximately 60 percent of its ammunition left, as well as half of its torpedoes, it was disorganized after the melee with the Allied cruisers and needed time to gather itself for a concerted strike at the anchorage. This would expose Mikawa's force to enemy air attack when the sun came up. The Japanese, no doubt recalling *Mikuma's* fate at Midway, were keenly sensitive to the threat posed by American carrier bombers on surface warships lacking air cover.¹⁶⁸ Mikawa could not know that the U.S. carriers had in fact withdrawn from the area the previous evening. Additionally, the Japanese appear to have underestimated the importance of the transport fleet to the American operation. Here again were signs of the disharmony which plagued Japanese inter-service relations in World War II. The IJA, underestimating the U.S. troops on the island and probably keen on saving face with the navy, emphasized that driving the enemy from Guadalcanal would present no serious problem. Why then should Mikawa risk his precious cruisers on a superfluous objective?¹⁶⁹

In any event, the First Battle of the Solomon Sea was a spectacular vindication of the IJN's night-combat doctrine. The USN had been outthought, outmaneuvered, and outfought. Four Allied heavy cruisers and one destroyer were sunk, in return for slight damage to the Japanese ships (excluding *Kako*). However, it must be noted that the Allies were caught unawares on the night of 8–9 August; had they been ready to receive Mikawa when he appeared, the battle may not have been as one-sided. This was not, strictly speaking, the fault of American night-fighting tactics, but rather its abysmal reconnaissance efforts. Mikawa, ever magnanimous, said after the war that he “was greatly impressed . . . by the courageous action of the northern

¹⁶⁸ The Japanese did, in fact, have aircraft available to cover the retirement of Mikawa's ships, but the conspicuous lack of a unified command for air and surface forces meant these were not available on short notice; Ohmae, “The Battle of Savo Island,” in *The Japanese Navy in World War II*, 242.

¹⁶⁹ Frank, *Guadalcanal*, 115–16; Ohmae, “The Battle of Savo Island,” in *The Japanese Navy in World War II*, 237–42.

group of U.S. cruisers. . . . Had they even had a few minutes' warning of our approach, the results of the action would have been quite different."¹⁷⁰ Allied conduct was characterized by command oversights and bungling. Victory in the battle was in no small part due to leadership mistakes on the other side. Interestingly, these same failings characterized Japanese conduct when the IJN and USN cruisers next met in action, two months later at the Sea Battle off Savo Island (Battle of Cape Esperance).¹⁷¹

On 11 October 1942, Rear Admiral Goto Arimoto led the three remaining heavy cruisers of *Sentai 6*, in concert with destroyers *Hatsuyuki* and *Fubuki*, out of the IJN's anchorage in the Shortland Islands and set course for Guadalcanal. Goto's mission was twofold: conduct a nighttime bombardment of Henderson Field, while providing cover for a reinforcement convoy to the island, including two seaplane tenders and six destroyers, carrying substantial parts of an army division. Two months had passed since the USN's thrashing at the First Battle of the Solomon Sea—where Goto had been present—and since then the Americans had not challenged the IJN at night around Guadalcanal. The Japanese admiral saw no reason why that should change. One might forgive Goto for his confidence; the admiral's sin was rather his failure to be shaken from his complacency, even as evidence that the USN was out to challenge him became more and more obvious. Goto was no Mikawa, and his lack of imagination would soon cost him his life.¹⁷²

The Japanese were unaware that awaiting their arrival off Guadalcanal was Rear Admiral Norman Scott's Task Force 64, made up of heavy cruisers *San Francisco* (Scott's flagship), and *Salt Lake City*, the light cruisers *Boise* and *Helena*, and five destroyers. The USN, after a

¹⁷⁰ Mikawa Gunichi in Ohmae, "The Battle of Savo Island," in *The Japanese Navy in World War II*, 244.

¹⁷¹ Frank, *Guadalcanal*, 122–23.

¹⁷² Dull, *A Battle History of the Imperial Japanese Navy*, 216, 220–21; Lacroix and Wells, *Japanese Cruisers of the Pacific War*, 308.

substantial bit of soul searching, had taken to heart some of the lessons of the First Battle of the Solomon Sea. Thanks to accurate intelligence, Scott's force knew of Goto's approach, and was in an excellent position to ambush him. However, the U.S. admiral's choice of flagship reflected a lack of appreciation for the advantages radar conferred on him. *San Francisco* carried the older metric-wave SC search radar, greatly inferior to *Boise* and *Helena*'s newer centimetric-wave SG sets. As it was traditional for an admiral to place his flag on the most powerfully armed ship, Scott stuck with *San Francisco*, when in hindsight it is obvious he should have placed himself on one of the light cruisers. This oversight probably cost Scott the opportunity to truly devastate Goto's Bombardment Force. To compound the issue, the Americans erroneously believed that the Japanese could detect metric-wave SC emissions. Scott therefore ordered all SC radars turned off during the approach, permitting only the use of the SG radars on the light cruisers.¹⁷³

Goto's Bombardment Force arrived off Guadalcanal before midnight on 11 October. As usual, the lookouts on the Japanese ships were exceptional; one of them spotted the glare of a burning American floatplane—from Scott's task force—that had malfunctioned and caught fire. The lookout dutifully reported what he saw, but Goto, still convinced the enemy was nowhere near, disregarded the report. The Bombardment Force blissfully continued its southeasterly course—*Sentai* 6 in column, with a destroyer on each beam of the lead cruiser and flagship, *Aoba*. This soon brought the Japanese right into the teeth of Task Force 64, steaming northeast in one long column, and in a position to cross Goto's "T"; the highest aspiration of any naval commander of the battleship era (whereby the two sides are arrayed at right angles, enabling one side to bring its entire broadside armament to bear, while the other can only use its forward guns). Goto was granted as much as 30 minutes of reprieve, however, as confusion and miscommunication on the American side—still with much to learn about night combat—

¹⁷³ Dull, *A Battle History of the Imperial Japanese Navy*, 216; Frank, *Guadalcanal*, 294, 297.

prevented Scott from establishing an accurate picture of the situation. But the bungling that night was greater on the Japanese side, as Goto continued to ignore the signs of an impending engagement. Meanwhile, the two forces kept closing in the darkness.¹⁷⁴

At 2346 local time, having already been tracking the Japanese for about half an hour with her SG radar, the light cruiser *Helena* could wait no longer; Goto's ships were only 5,000 yards away, and visible to the naked eye. Without waiting for permission from Scott—whose task force was in disarray after having come about on a reciprocal southwesterly heading—she snapped open her searchlights and opened fire with her 6- and 5-in. guns, hoping her consorts would take the hint. A few minutes before this, Goto had reduced speed when his vigilant lookouts reported strange ships fine off the port bow at 10,000 meters. The Japanese admiral thought this must be the reinforcement convoy, and ordered the recognition signal sent. The lookouts were in no doubt as to the ships identity however, and exclaimed they were enemy. Goto still hesitated, ordering a repetition of the identity signal as the range continued to drop. *Helena's* withering fire finally shook Goto from his complacency. American salvos smashed into *Aoba's* bridge, killing many men and mortally wounding the Japanese admiral.¹⁷⁵

Illustrative of the American confusion during the battle, one minute later Rear Admiral Scott, concerned he might be shooting on his own ships, ordered the task force to cease fire. However, not all of his captains cared to heed this order, and continued to administer punishment to the Japanese line. Scott was eventually satisfied with the identity of the enemy ships, and ordered firing resumed at 2351. *Aoba* was by now heavily hit. *Furutaka*, instead of reversing course in a bid to escape the American trap, saw the flagship's distress and came to her aid. At 2350, an American shell struck *Furutaka's* torpedo tubes, which ignited in a ball of fire. This

¹⁷⁴ Dull, *A Battle History of the Imperial Japanese Navy*, 216–17; Frank, *Guadalcanal*, 298–301.

¹⁷⁵ Dull, *A Battle History of the Imperial Japanese Navy*, 217–19; Frank, *Guadalcanal*, 301–02; Lacroix and Wells, *Japanese Cruisers of the Pacific War*, 309–10.

drew the Americans' attention away from *Aoba*, and *Furutaka* was soon foundering from multiple hits (the tough old ship eventually sank at 0228 local time). *Furutaka*'s gallant skipper, Captain Araki Tsutau, had nonetheless succeeded in saving *Aoba*, which came about and headed northwest at an impressive 30 knots. *Kinugasa*, the third heavy cruiser in Goto's Bombardment Force, came about immediately and dashed for safety, leaving the hapless *Furutaka* to her fate. So did the destroyer *Hatsuyuki*. *Fubuki*, however, was riddled with American gunfire as she turned, and soon began to sink.¹⁷⁶

With *Furutaka* and *Fubuki* crippled and sinking, Scott rallied his force minus his two destroyers—both badly damaged by a combination of enemy and friendly fire—and set off in pursuit of the three remaining Japanese ships, now retiring to the northwest. Shortly after midnight, *Kinugasa*, still full of fight, launched a salvo of Type 93 torpedoes which narrowly missed *Boise*. The Japanese cruiser followed this up with salvos of accurate 20-cm gunfire, which very nearly sank the American light cruiser; only the ingress of water from the Japanese shell hits flooded *Boise*'s burning forward magazines and saved the ship. *Boise*'s captain later acknowledged that *Kinugasa* shot expertly. At 0020, Scott, satisfied with the damage he had inflicted on the Japanese and with his own ships in a jumble, decided to retire. The vicious action had lasted just over 30 minutes. In return for one destroyer lost and a light cruiser and another destroyer heavily damaged, the USN had sunk one IJN heavy cruiser and one destroyer, while inflicting heavy damage on another heavy cruiser. The Japanese lost circa 415 men killed, with another 111 captured. American deaths totaled 163.¹⁷⁷

¹⁷⁶ Dull, *A Battle History of the Imperial Japanese Navy*, 219; Frank, *Guadalcanal*, 302–03; Lacroix and Wells, *Japanese Cruisers of the Pacific War*, 308–09.

¹⁷⁷ Dull, *A Battle History of the Imperial Japanese Navy*, 219–20; all of the captured men were from the destroyer *Fubuki*; Frank, *Guadalcanal*, 304–07, 309–10; Lacroix and Wells, *Japanese Cruisers of the Pacific War*, 310; Mark Stille, *Imperial Japanese Navy Destroyers 1919–45* (Oxford: Osprey Publishing, 2013), Kindle eBook Loc. 723–27.

The Sea Battle off Savo Island could hardly be called an overwhelming American victory. Nonetheless, Norman Scott was the first U.S. admiral to take on the Japanese in a night-fight and win. His victory had a great impact on American morale—helped in no small part by some fairly heavy overclaiming. Scott’s flagship *San Francisco*, for example, reported in her war diary the destruction of no less than two Japanese heavy cruisers, one light cruiser, and six destroyers.¹⁷⁸ In *San Francisco*’s defense, both sides were inclined to inflate damage inflicted after night actions; a natural tendency given the tremendous confusion of fighting large warships at close range, in restricted waters at night.¹⁷⁹ However, as in Mikawa’s victory at the First Battle of the Solomon Sea, Scott’s victory on 11–12 October had much to do with leadership failures on the other side. Goto’s complacency was remarkable. Had he heeded the reports of his well-trained—and no doubt increasingly anxious—lookouts, he may well have gotten off the first shot, avoided getting his “T” crossed, and possibly done great damage to Scott’s task force. Additionally, the American victory hid certain uncomfortable truths, the most important being that the USN still had much to learn about night fighting—especially the effective integration of radar. Equally troubling, many American sailors were killed by friendly fire in the battle.¹⁸⁰

As at the First Battle of the Solomon Sea, the engagement’s outcome did not prevent the successful completion of the transport mission. The Japanese reinforcement convoy completed its scheduled landing of the Japanese Army’s Second Division on the morning of 12 October, unmolested by Task Force 64. The only losses the convoy suffered was on the return trip, when U.S. aircraft sank one destroyer and damaged another, which eventually had to be scuttled. 39

¹⁷⁸ USS *San Francisco*, “Action Report: Night Action, October 11-12, 1942, p. 11,” Fold3: Historical Military Records: World War II War Diaries, http://www.fold3.com/browse.php#251|hsEUS91ace3dO_-Sj (accessed 21 September 2015).

¹⁷⁹ The Japanese, for example, initially claimed after the First Battle of the Solomon Sea to have sunk eight heavy cruisers, one light cruiser, and five destroyers; even after adjustments had been made, the claim stood at five heavy cruisers and four destroyers; Ohmae, “The Battle of Savo Island,” in *The Japanese Navy in World War II*, 239.

¹⁸⁰ Frank, *Guadalcanal*, 310–11.

more men lost their lives. In the end, it would be wrong to overemphasize IJN leadership failings without comparing these to corresponding USN failures. Luckily for the Americans, they could afford to lose and learn from defeat, since a war of attrition favored them. The IJN, dependent on a swift triumph in every campaign, had no such luxury.¹⁸¹

Despite the IJN's success in completing the transport mission on 11–12 October, a prominent characteristic of the Solomons Campaign was Japan's consistent failure to keep its soldiers on Guadalcanal properly supplied. The USN, on the other hand, despite losing heavily in ships and men, was able to bring in large numbers of troops, supplies and heavy equipment. This dichotomy was made greater by the ships the two sides normally utilized for transport missions. The Americans, with daylight air superiority, could bring in large, properly equipped transport ships. The Japanese, subject to dashing into the area by night and being safely away by sunrise, depended on high speed, and were thus forced to use their destroyers as transports (the famous "Tokyo Express"); a role for which the ships were totally unsuited. In essence, American airpower forced the IJN to use small warships—which consumed precious fuel at a prodigious rate—to transport troops and equipment in penny packets. This sapped IJN destroyer strength, ate into Japan's already critical fuel reserves, and undercut the IJA's ability to maintain pressure, let alone go on the offensive, against U.S. troops on Guadalcanal.¹⁸²

The climax of the naval war for Guadalcanal occurred on 12–15 November, when the IJN and USN fought the pivotal Third Battle of the Solomon Sea (Naval Battle of Guadalcanal). Fought in two phases over the course of two nights, it ranks as one of the most savage naval engagements in history. Characterized by fighting at extremely close range, even by night

¹⁸¹ Dull, *A Battle History of the Imperial Japanese Navy*, 220; Frank, *Guadalcanal*, 308–09.

¹⁸² Jonathan B. Parshall, "Oil and Japanese Strategy in the Solomons: A Postulate," *The Imperial Japanese Navy Page: Nihon Kaigun*, <http://www.combinedfleet.com/guadoil1.htm> (accessed 21 September 2015); Tanaka, "The Struggle for Guadalcanal," in *The Japanese Navy in World War II*, 209–11; concerns over the fleet's dire fuel situation featured heavily in Ugaki's war diary; Ugaki, *Fading Victory*, 200, 217, 240–41, 264.

combat standards, when the sun rose on 15 November the USN had narrowly triumphed in the most decisive surface action of the campaign, if not the entire Pacific War. Interestingly, IJN heavy cruisers played a largely secondary role in the battle, which was decided on the Japanese side mainly by battleships, light cruisers, and destroyers.

The battle's first phase was joined on the night of 12–13 November in “Ironbottom Sound” (the body of water between Guadalcanal, Savo Island, and Florida Island). Rear Admiral Abe Hiroaki's Bombardment Force—comprised of *Kongo*-class battleships *Hiei* and *Kirishima*, and accompanied by a light cruiser and 11 destroyers—was on its way to shell Henderson Field, but instead ran smack into Rear Admiral Daniel Callaghan's Task Group 67.4, made up of cruisers and destroyers. In a wild, point-blank melee, the two sides devastated one another. In the morning hours of Friday the Thirteenth, Abe retired without completing his bombardment mission, leaving *Hiei* crippled off Savo Island. Two Japanese destroyers were also sunk. But the USN suffered dreadfully in return: two light cruisers and four destroyers were lost, and both Callaghan and his subordinate, Rear Admiral Scott (who had defeated Goto at the Sea Battle off Savo Island) were killed. Aircraft from Guadalcanal and the U.S. carrier *Enterprise* eventually sank *Hiei*, the first Japanese battleship to be lost in World War II.¹⁸³

Although Abe's battleship force had been driven from the area, the battered Americans were in no position to stop Vice Admiral Mikawa from racing down “the Slot” (New Georgia Sound) the following night with *Chokai*, *Maya*, *Suzuya*, and *Kinugasa*. The first three aforementioned cruisers pumped 1,370 shells into Henderson Field. One month previously, between 13 and 16 October, the battleships *Kongo* and *Haruna*, along with *Chokai*, *Kinugasa*, *Myoko*, and *Maya*, had devastated the airfield and destroyed most of its aircraft and fuel stores.

¹⁸³ Dull, *A Battle History of the Imperial Japanese Navy*, 239–42; Mark Stille, *Imperial Japanese Navy Battleships 1941–45* (Oxford: Osprey Publishing, 2008), 16–17, 19–20.

Mikawa's bombardment however, while impressive, failed to repeat the damage, and the American airfield remained operational. Additionally, while the force was withdrawing at dawn, vengeful American carrier dive bombers pounced; *Chokai* and *Maya* were damaged, and *Kinugasa* was sunk. 88 men were killed. The veteran *Kinugasa* was the third heavy cruiser from *Sentai 6* to be lost in the campaign.¹⁸⁴

Determined to neutralize Henderson Field, and push through a vital reinforcement convoy to Guadalcanal, Admiral Yamamoto ordered Vice Admiral Kondo Nobutake to try again with a scratch force made up of *Kirishima*, heavy cruisers *Atago* (Kondo's flagship) and *Takao*, light cruisers *Nagara* and *Sendai*, and 11 destroyers. In a desperate bid to stop Kondo's Attack Force, U.S. Vice Admiral William Halsey, commander of the South Pacific Area, committed Task Force 64, composed of his two new battleships *Washington* and *South Dakota*. For the Americans, it was a supremely bold move. Two of their largest, newest, and most powerful warships were sent into restricted waters against Japanese forces which, though greatly inferior in gun power, could literally fill the water with deadly Type 93 torpedoes.¹⁸⁵

On the night of 14–15 November, the first battleship versus battleship clash of the Pacific War took place. The venerable *Kirishima* was seriously outmatched by U.S. Rear Admiral Willis "Ching" Lee's two modern battleships, and although she and the two heavy cruisers landed repeated hits on *South Dakota*, which staggered about blindly after losing electrical power, Lee closed the distance with *Washington* and, using radar-assisted gunnery, pummeled *Kirishima* into a blazing wreck; she was scuttled during the night. The situation was still potentially lethal for the American battleships, but amazingly, not a single Japanese torpedo found its mark. However, the Japanese retired believing that torpedoes had hit both U.S. battleships. It was not

¹⁸⁴ Dull, *A Battle History of the Imperial Japanese Navy*, 242–43; Lacroix and Wells, *Japanese Cruisers of the Pacific War*, 311.

¹⁸⁵ Dull, *A Battle History of the Imperial Japanese Navy*, 242, 248; Frank, *Guadalcanal*, 471–72.

until later that they realized the battle had actually been a tactical defeat, despite the fact that *South Dakota* had been hard hit, with three of Lee's four accompanying destroyers blown out of the water. Kondo's conduct in the battle was mixed, and was affected by his complete surprise at encountering enemy battleships. With a better grasp of the situation, he may well have been able to execute a more effective torpedo attack against the big American ships.¹⁸⁶

More importantly, the Third Battle of the Solomon Sea was a great strategic defeat for the IJN, as U.S. aircraft savaged the reinforcement convoy on which the Japanese had pinned their hopes. Despite the best efforts of Rear Admiral Tanaka Raizo, who in desperation beached his surviving transport ships, his convoy only succeeded in putting ashore 2,000 weary troops and almost no heavy equipment or supplies. 10 precious transports were lost. The Americans, on the other hand, used the battle to successfully bring in their own replenishment force unscathed, amounting to over 5,500 well-equipped men and many tons of supplies. The battle represented a proverbial fork in the road, as the Japanese gradually realized in its aftermath that Guadalcanal could not be held. On the last day of 1942, conceding defeat, the Japanese decided to abandon the island.¹⁸⁷

Before final victory off Guadalcanal, however, the USN on 30 November suffered another brutal reminder of the IJN's night-fighting proficiency. Rear Admiral Tanaka's Reinforcement Unit, a scratch eight-ship destroyer force on a supply run to Guadalcanal, turned the tables on Rear Admiral Carleton Wright's Task Force 67—four heavy cruisers, one light cruiser, and six destroyers—and with torpedoes sank one heavy cruiser and crippled three more, while losing only one destroyer in return. His humiliation of the USN aside, Tanaka's success at

¹⁸⁶ Dull, *A Battle History of the Imperial Japanese Navy*, 243–46; Kondo, "Some Opinions Concerning the War" in *The Pacific War Papers*, 315–17; Tanaka, "The Struggle for Guadalcanal," in *The Japanese Navy in World War II*, 193–95.

¹⁸⁷ Frank, *Guadalcanal*, 490, 538–39; Tanaka, "The Struggle for Guadalcanal," in *The Japanese Navy in World War II*, 191–96; Ugaki, *Fading Victory*, 318–19.

the Battle of Lunga Point (Battle of Tassafaronga), like so many other Japanese wartime accomplishments, was strictly tactical. His puny resupply mission was a proverbial drop in a bucket, in a campaign which had already been decided. At staggering cost, the Americans frustrated Tanaka's mission. At this late stage, the IJN's replenishment effort consisted of drums cluttering the destroyers' decks. Filled with foodstuffs and medical supplies, the drums were lashed together and provided with enough reserve buoyancy so the sick and starving soldiers on Guadalcanal could, theoretically, recover them from the beach. In the end, this improvisation was the best the Japanese could do to counter the massive American buildup.¹⁸⁸

The last Japanese troops were successfully evacuated in the KE Operation—right under American noses—on the night of 7–8 February 1943. The sea battles off Guadalcanal had taken a dreadful toll on men and materiel: in the final tally, the Japanese lost 24 warships and 14 transports; the Allies lost 25 warships and 4 transports. The Americans, though smarting from a number of drubbings, could replace their losses in a way the Japanese could not. Of significance to this study, only one IJN heavy cruiser, *Furutaka*, was lost in the type of battle for which her kind had been designed; the other two lost during the campaign succumbed to aircraft bombs and submarine torpedoes. The Allies, on the other hand, lost four U.S. and one Australian heavy cruiser in surface combat with the IJN, while losing one to air attack.¹⁸⁹

Sitting idle at Truk naval base in the Carolines during this critical period was the IJN's superbattleship *Yamato*. The campaign was a golden opportunity for the giant ship to make a significant contribution for Japan's war effort. However, a combination of leadership oversights and fuel shortages left *Yamato* where she was, as an improvised fuel tanker for the rest of the fleet. The battleship remained an idle spectator to the decline in Japanese fortunes; meanwhile,

¹⁸⁸ Dull, *A Battle History of the Imperial Japanese Navy*, 254–58; Frank, *Guadalcanal*, 518; Tanaka, “The Struggle for Guadalcanal,” in *The Japanese Navy in World War II*, 197–203.

¹⁸⁹ Dull, *A Battle History of the Imperial Japanese Navy*, 259; Frank, *Guadalcanal*, 601–03.

the IJN placed its hopes on victory in the waters around Guadalcanal on the overworked cruisers and destroyers. One can only imagine what effect *Yamato*'s presence may have had on the Solomons Campaign, not to mention in Kondo's Attack Force on the night of 14–15 November, when the Japanese faced Lee's battleships. By contrast, the Americans, not hamstrung by the same limitations, took a chance and risked their big battleships off Guadalcanal—and won.¹⁹⁰

¹⁹⁰ *Yamato*, while a behemoth, was a surprisingly maneuverable ship, and her draft was not much greater than that of her American counterparts; the conclusion must be that Yamamoto would have done well to risk her off Guadalcanal, either as a surface combatant, or in a shore bombardment role against Henderson Field; Chihaya, "Importance of the Japanese Naval Bases Overseas," in *The Pacific War Papers*, 63–64; Ireland, *Jane's Battleships of the 20th Century*, 174–75, 178–79; Skulski, *The Battleship Yamato*, 10, 17; Ugaki, *Fading Victory*, 240, 260.

CONCLUSION

The end of the Solomons Campaign saw the Japanese Empire march with ever quickening steps toward ruin and total defeat. After securing Guadalcanal, the United States spent the majority of 1943 building up overwhelming forces—as foretold by War Plan Orange—as it commenced an unstoppable, two-pronged island-hopping drive through the South and Central Pacific. By 1945, the American juggernaut had reached the shores of Japan itself. The IJN was Japan’s first line of defense; however, its effective destruction in the two great fleet actions of 1944 left it in no position to intervene. During the last year of the Pacific War, American carrier aircraft roamed at will over what was left of the Japanese Empire, and there was nothing the IJN’s shattered remnants could do about it.

The story of the IJN in the Pacific War is largely the story of tactical farsightedness undone by strategic myopia. Japanese naval planners, obsessed with the raw tactical potency of its ships, realized to its profound detriment that this was not a guarantor of operational or strategic success. In the Solomons, the USN, while suffering high losses, was nonetheless able to triumph in part because its leaders better understood the integration of tactics with operations, strategy, and logistics. Conversely, on the Japanese side, the tactical proficiency and spirited conduct of many vessels was negated by the shortcomings inherent in Japan’s senior military leadership. What the personnel provided, their leaders largely squandered.

The question that begs to be answered, of course, is how much did all of this really matter? A Japanese triumph in World War II was unlikely from the beginning, once the IJN insisted that the United States had to be included in it. It was virtually nonexistent after Midway. Japan, unlike the United States and its allies, depended on its enemy conceding to a limited war, and giving in after a swift battlefield thrashing. This was highly unlikely from the start,

especially once Admiral Yamamoto united America in hatred of Japan, with his surprise attack on Pearl Harbor. Whatever hopes Japan's military leaders had—of forcing the United States to acquiesce in a negotiated peace in their favor—evaporated six months later with the loss of Vice Admiral Nagumo's four carriers at Midway. Once the Americans then succeeded in gaining a foothold in the Solomons, the path to Japan's eventual ruin was set. There was no going back.

Nevertheless, the IJN had the ability, in 1941–1942, to operationally defeat the USN Pacific Fleet, and secure incontestable hegemony over the Pacific for a significant period of time. This it failed to do. Whether the defeat of the USN in the Pacific would have been sufficient to bring the United States to the negotiating table will, of course, never be known. Given American post–Pearl Harbor sentiment, however, it is reasonable to conclude that a negotiated peace was simply not in the cards for Japan. But what if the Japanese Empire had only attacked the European colonial powers in Asia, like the army wanted? Had the IJN been able to shed its dogmatic view of the USN as its mortal enemy, the Pacific War may well have turned out quite differently. The Japanese would, at the very least, have put President Roosevelt in a highly unenviable position—trying to drag a reluctant American people into a war to preserve European imperialism.

As Allied airpower grew exponentially during 1943, the Japanese heavy cruiser's prowess in surface warfare was rendered increasingly irrelevant. Furthermore, Japan's failure to develop certain second-generation technologies, most notably radar, meant that its initial superiority in night combat was eventually eclipsed by the USN's effective integration of tactics and electronics. The fates of Japan's heavy cruisers reveal a telling statistic: of the 16 units lost during the course of the Pacific War, only two (*Furutaka* and *Haguro*) were sunk in the traditional surface engagements for which the ships had been designed. In the same period, four

heavy cruisers (*Kako*, *Ashigara*, *Maya*, and *Atago*) were sunk by submarines. The remaining 10 ships (*Aoba*, *Kinugasa*, *Nachi*, *Chokai*, *Mogami*, *Mikuma*, *Kumano*, *Suzuya*, *Tone*, and *Chikuma*) were all destroyed in air attacks. Only *Myoko* and *Takao* survived the war.¹⁹¹

This ultimately speaks to the obsolescence of the traditional big-gun surface warship in World War II. Heavy cruisers, as the backbones of interbellum navies, were after 1942 largely impotent in the face of the aircraft bomb and submarine torpedo. As if to further emphasize this fact, a number of cruisers were during the war converted to anti-aircraft ships, in an attempt to better employ them as carrier escorts. This included the removal of some, if not most, of the ship's heavy armament, and its replacement with anti-aircraft guns of varying caliber. *Maya* was gelded in this manner during 1943–1944.¹⁹² The IJN was, of course, clutching at straws; as discussed, the inherent defects in Japanese anti-aircraft weapon systems technology, coupled with the overwhelming nature of Allied airpower during 1943–1945, rendered this conversion largely ineffective. In the end, the fate of the IJN's heavy cruiser force serves as a stark reminder that planning for war and actually waging it can be two very different things. There are lessons in this for the militaries of any era.

¹⁹¹ Evans and Peattie, *Kaigun*, 507–08; Stille, *Imperial Japanese Navy Heavy Cruisers*, Loc. 1259–65.

¹⁹² After the damage she suffered at Midway, *Mogami* underwent conversion to an aircraft cruiser à la *Tone* and *Chikuma*; Lacroix and Wells, *Japanese Cruisers of the Pacific War*, 327, 329–33, 492–93.

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