

USAWC RESEARCH PAPER

AD 764605

THE TREATY CRUISER:
A STRUGGLE FOR NAVAL ASCENDANCY IN PEACETIME

A MONOGRAPH

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6 March 1972

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SECRET

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FORMAT: Monograph

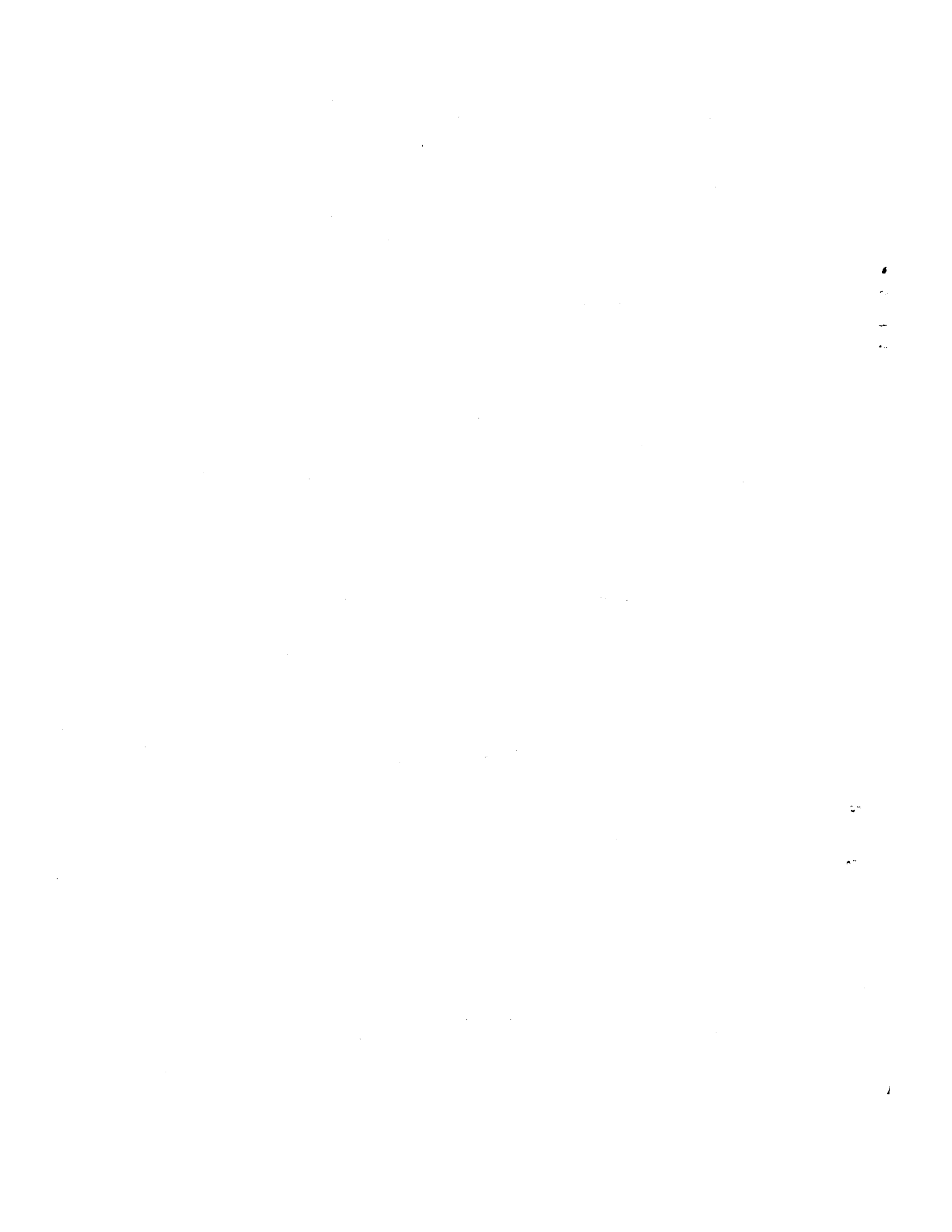
DATE: 6 March 1972

PAGES: 28 41

CLASSIFICATION: Unclassified

TITLE: The Treaty Cruiser: A Struggle for Naval Ascendancy in Peacetime.

With pressure mounting in the United States for agreement in arms limitations with the Soviet Union, can any lessons be learned from tracing the history of a particular weapons system--the 8-inch gun, Treaty cruiser--through the disarmament period between the two world wars? The birth of the Treaty cruiser at the Washington Naval Conference is explained, and the reaction to the qualitative limitations of the treaty by the five major naval powers is examined. A literature search was used to study the development of the Treaty cruiser from 1922 until World War II. The effect of the Geneva and London Naval Conferences on the naval race in Treaty cruisers is investigated, and violations of the treaties by the contracting powers are discussed. The fifteen year struggle to limit cruisers in numbers and in size results in some obvious lessons of possible application today: economy, and the high cost of weapons systems, leads nations to the conference table; weapons in being are bargaining powers; treaties, to be valid, must be verified; arms limitations agreements lessen tension, but are usually greeted with unwarranted optimism; and the nation most anxious for an agreement will pay more to get it.



When the Washington Naval Conference adjourned in February 1922, the heads of state of the world's five leading naval powers congratulated themselves on having ended, at least temporarily, a costly and rapidly escalating naval armaments race. Yet, as Great Britain, the United States, and Japan prepared to scrap major naval units and cancel extensive projects for battle cruisers and battleships in compliance with the disarmament and limitation clauses of the treaty, the words in two short paragraphs, Articles XI and XII, effectively dropped the starting flag for the beginning of a new naval rivalry that was to embroil the signatory powers in a struggle for supremacy lasting until World War II.

As pressure mounts in the United States to reach agreement with the Soviets on arms limitations, it may be instructive to trace the history of this unexpected building race through the fifteen years of suspicion, compromise, disillusionment, and frantic construction that produced three major international naval agreements, but could not prevent the onset of a second world war.

The major accomplishments of the conference were real enough: a fixed ratio in total tonnage for capital ships, a ten year moratorium on battleship construction, a limitation on gun size and displacement for any capital ships to be built in the future, and equivalent limitations

on aircraft carriers all seemed to insure a reasonable approach to naval competition for at least the fifteen years the treaty was to be in effect. The senior American delegate, Secretary of State Hughes, was jubilant: "This treaty ends, absolutely ends, the race in competition of naval armaments," he said.¹

The upper limit of 8-inch guns and 10,000 tons displacement for auxiliary vessels had been decided arbitrarily. The completion, just prior to the conference, of the first two ships of the British Hawkins class, displacing 9,750 tons and mounting seven 7.5-inch guns of a new design² undoubtedly influenced the conferees. Also, the last two ships of the class were expected to displace 10,000 tons when commissioned.³

Nevertheless, the problem of cruisers--what size should they be, what should their primary mission be, how many are required--had always been a vexing one. Cruisers had never been defined properly. Captain H. G. Thursfield of the Royal Navy examined the archives and found, after much research, that the Royal Navy defined a cruiser as, "a craft designed especially for cruiser duties."⁴ Throughout the first world war, and into the twenties, the title of cruiser had graced coastal sailing ships of 20 tons displacement armed with rifles up to armored giants of over 40,000 tons mounting

15-inch guns.⁵ As late as World War II, the United States persisted in calling the Alaska class ships "large cruisers",⁶ although by every conceivable criteria and measurement they were patently battle cruisers.

Traditionally, the World War I cruiser was designed to track down and destroy commerce raiders, serve as an escort for convoys, provide a screen against destroyers and torpedo boats for the main battle fleet of capital ships, and, when necessary, enforce a blockade. The imperialist powers, Great Britain and France, used small, lightly armed cruisers to "show the flag" in foreign and colonial ports. The number needed did not depend on the number of capital ships in commission nor upon the number of cruisers built by potential adversaries--a point not completely understood by the signatory powers at Washington--but instead on the duties they had to perform. The British, in particular, believed that "numbers" of cruisers were essential to her interests; no lesser number of individually superior ships could be substituted for the required minimum.⁷

Hopes of Great Britain and the United States to limit total tonnage of auxiliary ships at the Washington Conference foundered on French opposition and, probably, a general suspicion on the part of the other naval powers, Japan and Italy, that they had already made enough con-

cessions for one treaty.

Naval strategists were not completely satisfied with the limit of 10,000 tons. The US Navy's General Board, before the Washington Conference met, had favored 8-inch gun cruisers of 12,000 tons displacement as suitable for independent operations in the Pacific,⁸ and the French had stated at the conference that they did not wish to be limited to 10,000 tons displacement in auxiliary ships.⁹ Another road block in the path of cruiser limitations was Great Britain's unwillingness to grant parity to the United States in this type of warship. The reason was simple: in 1921 Great Britain had 53 cruisers built and building, and the United States had 19, some of which were antiques. Thus, with naval competition in battleships postponed by treaty, naval planners and strategists turned their attention to the next most important category of ship, the 10,000 ton "Treaty" cruiser.¹⁰

The initial reaction to the Washington Treaty occurred halfway around the world, and, like the first snowfall of the ice age, was virtually ignored. Japan changed the main armament of two cruisers under construction from the standard 6-inch gun to 200mm (7.9-inch) guns. The Kako was laid down in November 1922, a light cruiser of 7,100 tons standard displacement, and a month

later work on her sistership, Furutaka, was begun. They were probably planned as an answer to the United States' 7,100 ton Omaha class, and as completed both cruisers carried six 7.9-inch guns in single enclosures. This resulted in an increase in displacement to 8,100 tons. Although the Kako and Furutaka made no attempt to equal the tonnage limit set for Treaty cruisers, the race for supremacy in 8-inch gun ships had begun.

Japan followed these first two ships by starting construction on the Aoba and Kinugasa little more than a year later, in early 1924. They displaced 8,300 tons, mounted six 8-inch guns in twin turrets, and carried 4.7-inch AA guns compared to the 3.1-inch AA guns of the Furutaka class.

By 1924 all of the major naval powers had sorted out their programs and authorized construction of Treaty cruisers. Great Britain, Japan, and France actually laid keels in 1924. The British, concerned with the threat to centuries of leadership at sea and to a worldwide commercial and colonial lifeline posed by this new and untried species of warship, were determined to minimize risks by taking an early lead in the race. Japan, her plans for China and Manchuria beginning to take form, had gained security in the Western Pacific through the provisions of the Washington Treaty that prevented any further construction of bases in that area by the United

States and Great Britain. She had, however, abandoned an extensive battleship and battle cruiser building program¹¹ designed to bring the Japanese Navy on a par with that of the United States, and to establish this preeminence in the Western Pacific guaranteed by treaty in 1922, Japan realized that she had to maintain equality in the new class of 10,000 ton cruisers.

Ironically, both of these early building programs--four ships were laid down by Japan and five by Great Britain in 1924--were triggered in part by the United States Naval Authorization Bill of 1924. Eight 10,000 ton Treaty cruisers were authorized by Congress, but typically, only a dribble of funds were forthcoming for construction. To the frustration of the Navy, the keel for the first of these ships, the Pensacola, was not laid down until October 1926. The last of them was finally commissioned seven years after the bill was passed, in 1931.

In 1924 the Japanese laid down the first two ships of the Myoko class. The Myokos were truly built to treaty limitations. With a standard displacement of 10,940 tons, they mounted ten 8-inch guns in five turrets and could maintain a speed of over 34 knots. Belt armor was four inches. Great Britain laid down five ships of the Kent class, displacing 9,750 to 9,850 tons and carrying eight 8-inch guns. Initially, they had eight torpedoes

compared to 12 on the Myoko class cruisers. The British ships sacrificed very little protection for speed, maintaining $31\frac{1}{2}$ knots with a maximum thickness of armor of five inches. The Kent set the pattern for later British Treaty cruisers: they appeared to be outclassed on paper by contemporary ships of other navies, but with a high freeboard, exceptional sea-keeping qualities, good protection, and long radius of action, they more than proved their worth in World War II.

The third starter, France, began the first of two Tourville class cruisers in 1924, and the design emphasized speed and armament on a displacement of almost exactly 10,000 tons. The two French ships mounted eight 8-inch guns and achieved over 35 knots on trials. Armor protection, however, was almost nonexistent. In the equation of firepower, protection, and speed, the French, constrained to an upper limit of 8-inch guns by treaty, sacrificed all protection for speed.

A year later, in 1925, Great Britain and Japan continued their programs in an orderly fashion; the British laid down two more Kent class cruisers, and the Japanese replied with two more Myokos. Italy drew abreast of France by commencing the Trento and Trieste, both with eight 8-inch guns and a three inch armor belt. The Italian cruisers were powered by four-shaft geared turbines

that developed 150,000 shaft horsepower, making them the most powerfully engined cruisers in the world. They were able to maintain 35 knots with ease. The United States, convinced that there was no threat to her security, failed to appropriate funds and no construction was started.

By 1927, the United States Navy found itself losing a naval race it had not wanted to run; with only two 8-inch gun cruisers building, it could expect none to be completed before 1930.¹² By that time, Great Britain would have commissioned 14, Japan eight, France three, and Italy two. The Washington Treaty had unintentionally divided cruisers into two categories: 8-inch gun "heavy cruisers", and 6-inch gun "light cruisers". (This unnatural situation continued until "light" cruisers often displaced more than "heavy" cruisers.) But there was no solace to be gained in viewing the US light cruiser fleet, either. We possessed only the 10 ships of the Omaha class, all of which were severely limited in their effectiveness by poor distribution of their 6-inch main battery guns. In comparison, Britain had 40 light cruisers, Japan 21, France 8, and Italy 9.¹³

Hoping to correct this appalling state of affairs, and perhaps save some money in the process, President Coolidge issued a call to the major naval powers to attend a conference at Geneva in 1927. The object: to

place the same 5:5:3 ratio on total cruiser tonnage as the Washington Conference placed on capital ships. Within that tonnage, each nation would be free to build any size cruiser it needed, up to the 10,000 ton limit of the Washington Treaty. The conference was an immediate failure, since France and Italy refused to attend. France wished to discuss air, ground, and sea disarmaments as a package, rather than naval limitations alone; Italy was fearful of losing the parity gained with France at the Washington Conference.

The British and the Americans approached the Geneva Conference with divergent views on cruisers. Great Britain, with a requirement for a great many small 6-inch gun cruisers to patrol a world-wide empire, had built Treaty cruisers in answer to the implied threat of the United States 1924 authorization bill and the very real threat of the Japanese building program. Britain wanted quantitative limits on the expensive, 10,000 ton Treaty cruisers that constituted the naval armaments race. The United States, eyeing the vast expanses of the Western Pacific, had an urgent need for larger, more powerful cruisers with extended range. West of Pearl Harbor, fueling stations were few and mostly undefended, while the British had a well-developed network of overseas bases. When the two delegations each presented their

demands, based on their individual standpoints, the disparity was enormous. Japan also demanded a significant increase in total tonnage for auxiliary ships. The conference ended without agreement of any kind on limitations, and the competition in Treaty cruisers continued.

Great Britain had 15 Treaty cruisers built or building by 1928, and all of them were completed by 1931. Thirteen of these ships carried eight 8-inch guns on a displacement of 9,750 to 9,975 tons, and two, the York and Exeter mounted six 8-inch guns with a displacement of 8,250 and 8,390 tons. Japan began work on the last two ships of the four ship Takao class in 1928, bringing to 12 the number of Treaty cruisers built and building. The Takao class cruisers had slightly better protection than the Myokos, mounted ten 8-inch guns, and displaced 11,350 tons with a speed of 34 knots. Although the Japanese later converted the Mogami and Tone class light cruisers to 8-inch gun cruisers, no further Treaty cruisers were laid down by Japan after 1928. Great Britain followed a similar course, and 1928 marked the last year in which she began a Treaty cruiser.

With the bruises suffered at Geneva still showing, the United States entered the naval race in earnest in 1928 by laying the keels for six Northampton class cruisers. Well within treaty limits due to a regrouping

of their main armament from four to three turrets,¹⁴ they carried nine 8-inch guns at a maximum speed of 32½ knots. The Chicago, at 9,300 tons, was the largest, but four ships of the class displaced only 9,050 tons. Although they were considered a better investment than the Salt Lake City class, which had never been completely satisfactory,¹⁵ they were not clearly superior to the older Japanese Kako class, designed before the Washington Treaty came into effect.

Improvements were made in the two ships of the Indianapolis class, begun in 1930. More stable than the Northhamptons, they had the same main battery and speed, but displaced 9,950 and 9,800 tons. Additionally, the first of seven Astoria class cruisers was laid down the same year. They were better protected than the the Indianapolis, with five inch belt and turret faces, and still managed over 32 knots. Displacement was 9,950 tons.¹⁶

France and Italy continued their private competition in Treaty cruisers with ships that were remarkably similar. (Table I summarizes the development trends for the five major naval powers through this period.) France began the first of four Suffern class ships in 1926, and laid down one cruiser each year through 1929. Just under 10,000 tons standard displacement, the Sufferns gave up some speed for armor protection--a distinct departure

Treaty Cruisers Built and Building (Cumulative), 1922-1935

	<u>1922</u>	<u>1923</u>	<u>1924</u>	<u>1925</u>	<u>1926</u>	<u>1927</u>	<u>1928</u>	<u>1929</u>	<u>1930</u>	<u>1931</u>	<u>1932</u>	<u>1933</u>	<u>1934</u>	<u>1935</u>
United States	0	0	0	0	1	2	8	8	11	15	15	16	17	18
Great Britain	0	0	5	7	11	14	15	15	15	15	15	15	15	15
Japan	2	2	6	8	8	10	12	12	12	12	12	12	12	12
France	0	0	1	2	3	4	5	6	6	7	7	7	7	7
Italy	0	0	0	2	2	2	2	4	6	7	7	7	7	7

Table No. I

in design philosophy for France--but made no change in the main armament of eight 8-inch guns. Not everyone in the French Navy was pleased by the lightly protected Tourvilles; some French officers were reported to have referred to them as costly make-believe, "et poudre aux yeux!"¹⁷ Italy countered with four ships of the Zara class, beginning two in 1929 and one each in 1930 and 1931. Displacing 11,500 to 11,900 tons, they mounted eight 8-inch guns. Like the French Sufferns, there was an increase in armor protection, but at a sacrifice of 2-3 knots of speed.

In 1930 the Italians also began construction of an improved Trento class cruiser, the Bolzano. Displacing 11,065 tons, she was no better armored than the Trento, but with geared turbines developing over 150,000 horsepower, Bolzano achieved a speed of over 38 knots on trials and was considered to be a smaller version of the traditional battle cruiser.¹⁸ Main battery, as in all French and Italian Treaty cruisers, consisted of eight 8-inch guns in four turrets.

The London Naval Conference of 1930 was called at the behest of King George V, and mirrored the economic crisis that was gripping the major naval powers in that depression year. The ten year building holiday in capital ships, a provision of the Washington Treaty, was also due to expire in 1931, and the thought of a renewed

naval race in a class of ships costing four times as much as the Treaty cruisers was of concern both to His Majesty's government and the Hoover administration. Specifically, it was hoped that the conference would be able to extend the limitations made at Washington to other classes of ships, primarily cruisers; reduce tension, and prevent prohibitively expensive naval competition between the great powers.

In its final form, the Treaty produced fragmented results, since France and Italy would not sign the articles pertaining to the all-important quantitative limitations on cruisers, destroyers, and submarines. They did sign, along with Great Britain, the United States, and Japan, the first two parts of the treaty that extended the moratorium on capital ships for five more years and established a minimum tonnage for aircraft carriers. Carriers were carefully defined so that a hybrid vessel (e.g., a cruiser with a flight deck for several aircraft on the quarterdeck in lieu of the aft main battery turrets) could not be charged to carrier tonnage but would have to be charged to cruisers.¹⁹

The foundation of French and Italian intransigence was based on Italian demands for parity in cruisers with France, a requirement justified in Mussolini's eyes by Italy's long coast line. France, on the other hand,

could not agree to cruiser equality, citing her need to protect overseas colonies.²⁰ By this time the French Navy, frustrated by the same tight money policy plaguing the United States Navy, was beginning to lose faith in the efficacy of treaties as a deterrent to Fascist and Nazi ambitions. Squeezed between the rising militancy of Hitler and Mussolini, France considered upgrading their La Galissonniere class of light cruisers (7,600 tons, nine 6-inch guns) by replacing the main armament with six 7.6-inch guns.²¹

The United States, Great Britain, and Japan signed Part III of the London Naval Treaty, dealing with limitations on auxiliary ships. There were three major provisions. First, the treaty legitimized the informal results of Washington by dividing cruisers into two categories: (a) mounting guns greater than 6.1 inches; and category (b) mounting guns 6.1 inches or less. Second, maximum tonnages for cruisers, destroyers, and submarines were established. For cruisers, these were:

<u>Country</u>	<u>(a) Cruisers</u>	<u>(b) Cruisers</u>
United States	180,000	143,500
Great Britain	146,800	192,200
Japan	108,400	100,450

Cruiser tonnage could be increased by as much as 10% by subtracting the same tonnage from destroyers. And finally, an "escalator clause" permitted any of the

contracting powers, upon prior notice, to increase the tonnage in one or more categories. Use of this clause triggered permission for the other signatory nations to make proportional increases. Also, the United States was permitted to reduce its (a) cruiser tonnage by 30,000 tons if desired, which would bring the number of US Treaty cruisers to 15, equal to Britain's 15, and at the same time build an additional 45,500 tons of (b) cruisers.

Although the Japanese Navy and press were not pleased with the results of this conference,²² Japan had succeeded in achieving parity with the United States and Great Britain in submarine tonnage, and she was allowed to retain all of her tonnage in underage destroyers. Cruiser tonnage authorized for Japan was equivalent to those ships already built and on the ways.

If an advantage was gained by anyone in the cruiser categories, it was the United States who had achieved a slight edge. While Japan and Britain were prevented from laying the keels for any more Treaty cruisers, the United States could build three more. More important, the three great naval powers had at last placed a damper on the dangerous and escalating naval race in 10,000 ton, 8-inch gun ships, but it had taken nine years and three formal international conferences to accomplish

this goal.

In 1931 France and Italy each began work on their seventh and last Treaty cruiser. In March the Italians laid the keel for the Pola, a Zara class ship, and the French laid down the Algerie in the same month. The Algerie displaced 10,000 tons and mounted eight 8-inch guns. Belt armor was over four inches, and a speed of 31 knots was realized. Anti-aircraft protection was particularly strong, and for the first time equalled that of the Italian cruisers.

The United States continued to build 8-inch gun cruisers. At last awakened to the Japanese naval threat, Congress appropriated funds for four Astoria class cruisers in 1931, and one each in 1933 and 1934. The last 8-inch cruiser to be built before the expiration of the Washington Treaty was Wichita, displacing 9,324 tons and mounting nine 8-inch guns.

The English-speaking nations were again instrumental in arranging a Second London Conference in the closing weeks of 1935, but by then international tensions were rising and the atmosphere for disarmament was poor. Italy refused to attend, and Japan appeared only long enough to demand equality with Great Britain and the United States. Japan's attitude was not unexpected; her demands were refused. France, Great Britain, and the

United States reached an agreement including the provision that they would refrain from building cruisers over 8,000 tons displacement until 1942,²³ with an escape clause stating that, if any power not signatory to the treaty exceeded its limitations, the contracting powers could also disregard the treaty in their own warship construction. Thus, the success of the Second London Naval Treaty depended entirely on the nations that had refused to sign it.

Within a few months after the treaty had gone into effect, Japan announced that qualitative limitations without quantitative restrictions were meaningless, and she could not abide by the provisions of the London Treaty. In particular, Japan objected to the restrictions on battleship size and armament (35,000 tons and 14-inch guns). The failure of the Second London Naval Treaty, in June 1937 and before it had been on the books six months, marked an end to efforts in limiting naval armaments.

In any examination of the naval race in cruisers between the two world wars, the question of treaty violations must be considered. With little doubt, Japan and Italy violated the Washington Treaty by building cruisers of standard displacement greater than 10,000 tons. It is certain that the United States, Great

Britain, and France did not exceed treaty limitations. No naval power built cruisers mounting guns of greater caliber than eight inches, possibly and cynically, because caliber is easier to estimate from a photograph than is displacement.

Italy found herself in the position of playing "catch-up" to her potential foe, France, in every class of ship except destroyers. By 1930, Italy still had only four underage battleships to France's nine, and two Treaty cruisers commissioned to France's four. Prevented by the Washington Treaty from building battleships, Italy had entered the naval race in cruisers a year behind the French. These factors, combined with the militantly Fascist government of Mussolini in power during this period perhaps accounts for the fact that every Italian Treaty cruiser exceeded 10,000 tons standard displacement.²⁴ It is not reasonable to excuse these violations on the grounds that an attempt was made to stay within 10,000 tons and minor errors or modifications in construction pushed them over the limit; the British built 13 Treaty cruisers that varied within $2\frac{1}{2}\%$ to $\frac{1}{4}\%$ of the treaty limit, all on the low side, while France hit the treaty limit on the head with three cruisers and was on the low side by $\frac{1}{2}\%$ on four others. It could be done, and naval designers of three nations proved it.

Italy exceeded the tonnage limit by from 5% to 19%. These violations were either not known or were discounted during World War II, since the Italian Navy suffered a decisive defeat in the Mediterranean, and all seven of her Treaty cruisers were lost during the war.

The Japanese case is more complex. The Washington Naval Treaty was hailed as a success in Japan, providing that nation international recognition as a first class naval power. Fleet Admiral Tomosaburo Kato, the Japanese representative, received praise for adding to the prestige of the Japanese Navy.²⁵ Under the leadership of Admiral Kato, Japan was faithful to her treaty commitments. The Japanese fleet, in being and under construction, was drastically reduced, and the impressive "eight-eight" program of eight new battleships and eight battle cruisers was cancelled.²⁶ Kato believed in a defensive navy for Japan as a deterrent to British and American opposition in the Far East, and his leadership was strong enough to control reactionary elements in the Japanese Navy. Although he died in 1923, his influence was still felt by the Japanese delegation at the London Conference in 1930, as Japan agreed to quantitative limitations on cruisers.²⁷

Between the signing of the Washington Treaty and the convening of the London Conference in 1930, Japan

laid down two separate classes of Treaty cruisers, the Myokos and the Atagos. The four Myokos were over 30 feet longer than the British Dorsetshire class (9,975 tons), drew two more feet of water, and had one additional 8-inch gun turret. Built with a tower-like superstructure and control top, the Myokos were possibly top-heavy and marginally stable.²⁸ Upon completion, they displaced nearly 11,000 tons. The Atago class were the same length, drew an additional foot of water, and had better protection than the Myoko cruisers. They displaced 11,350 tons when built.

Were these cruisers modified immediately after trials, when their lack of stability came to light? It is possible that the navy preferred to restructure these ships, increasing displacement over that permitted by the Washington Treaty, rather than face the more difficult reconstruction that would have been required to increase stability and stay within the 10,000 ton limit.

Although no less an authority than Samuel Eliot Morison²⁹ claimed that the Japanese "flouted" the cruiser limitations of the Washington Treaty, and other writers both before and after the war have agreed, it is possible that the Japanese government was not aware of the tonnage violations perpetrated by their navy-- at least not until after the unsatisfactory results of

the London Conference in 1930. Certainly the bellicose statements of senior Japanese naval officers did nothing to calm American and British fears; after the First London Naval Conference Vice Admiral Suyetsugu, Commander in Chief, Combined Fleet, stated that "...if we are placed in a dangerous position by a treaty we must remedy that by building ships which are outside of the treaty limits. Others are doing the same thing."³⁰

Japan was a definite threat to the peace of the Asian continent in the thirties, but on the international level her strategy was defensive. Although Japan certainly violated the spirit of the naval treaties by planning the 64,000 ton Yamato class battleships while the treaties were still in force,³¹ the keel of the first of these giants was not laid until 1937, after Japan had formally absolved herself of treaty obligations.

Unquestionably, Japan, with 12 eight inch gun cruisers built and building to the United States' 18 in 1936, made every effort to upgrade her cruisers. As early as 1935, Japan had stated unequivocally that her intention was to use eight inch gun cruisers to make up the deficit in capital ships.³² Japan's Treaty cruisers were unequalled in speed, firepower, and protection. Part of this edge over her adversaries was brought about by the Japanese "Long Lance" 24-inch torpedo, a development

well ahead of its time. The Japanese, unlike the other naval powers, armed all of their cruisers with torpedos, and used them to great advantage in the early phases of the Pacific War.

Frequent modernization and refit were an integral part of the Japanese program. The Myoko class underwent modernization in 1936, and again in 1940. Protection was increased, more anti-aircraft guns installed, and fire control updated. The standard displacement of these ships by early 1941 was 13,380 tons.³³ Similarly, Atago and Takao experienced several modifications, including a complete refit in 1939-40. Maya was also modernized. At the onset of World War II this class displaced 13,160 tons.³⁴

The oldest of the Japanese Treaty cruisers were also updated. Furutaka and Kako were modernized in 1937-38, with a corresponding increase in displacement from 8,100 to 9,150 tons. In 1937, Aoba and Kinugasa underwent refit, upping the displacement from 8,300 tons to 9,000 tons(Aoba) and 9,380 tons (Kinugasa).

Accurate vital statistics on Japanese warships were difficult to determine from the very beginning of competition in Treaty cruisers. The reliable yearbook, Jane's Fighting Ships, continued to report the Aoba and Furutaka at 7,100 tons displacement every year until they were sunk, and carried the Atago class heavy cruisers

at 9,850 tons.³⁵ The Japanese were secretive about their warships, and consistently reported displacements that were well below the actual values. At the London Conference of 1930, Japan was permitted 108,400 tons of (a) cruisers, i.e., cruisers mounting guns greater than 6.1 inches. This figure corresponded to the "official" tonnage of the 12 eight inch gun cruisers then built and building. Their actual displacement came to 121,960 tons, giving the inscrutable Japanese a "fudge factor" of about 12½%!

The disparity in 8-inch gun cruisers with the United States caused Japan to convert two classes of light cruisers to heavy cruisers in the years just before World War II. Two light cruisers of the Tone class were laid down in 1934-35, with a design displacement of 8,500 tons and mounting twelve 6.1-inch guns in four turrets, all uniquely mounted forward. The treaties expired for Japan while they were building, and their main armament was changed to eight 8-inch guns, in the same four turret arrangement. The new displacement was 11,215 tons, and a shaft horsepower of 152,200 drove these very successful ships at 35 knots.

The Mogami class of four light cruisers underwent two major modifications. Completed in 1935, the first two ships of the class were taken out of service a year

later when they proved to be unstable--a familiar problem. They were reconstructed along with their sisterships, raising displacement from 8,500 tons to 11,200 tons. In 1939-40, all ships were refitted with ten 8-inch guns in place of the fifteen 6.1-inch guns originally carried. Bulges and protection were added, and the final displacement became 12,400 tons.

Apart from the nations that signed the Washington and London Naval Treaties, one other power violated the provisions of a naval treaty--Germany. Prevented by the Treaty of Versailles from constructing any warships in excess of 10,000 tons displacement, the Germans came up with a startling new design in the late twenties, culminating in the famous "Pocket Battleships". These three ships, advertised as 10,000 ton Panzerschiffe, mounted six 11-inch guns in two turrets, had armor protection equal to the best Treaty cruiser, and made 26 knots on diesel engines. The Deutschland (later, Lützow) was commissioned in 1933 and displaced 11,700 tons. The later two ships were completed in 1934 and 1936, and displaced 12,100 tons.

The three heavy cruisers completed by Germany in 1939 and 1940 fell into the same overweight category. Admiral Hipper and Blücher carried eight 8-inch guns and displaced 13,900 tons. Prinz Eugen, similarly armed,

displaced over 14,000 tons.³⁶ All were listed by Germany as 10,000 ton heavy cruisers. They were exceptionally well-protected, and were probably the most powerful cruisers of their day.

The Treaty cruisers, were, after all, a very peculiar type of warship. Conceived as a political expedient in order to force an agreement to limit the fighting power of a class of ship that was at best ill-defined, they could not be built without compromising armament, protection, or speed. The period of their existence, from 1922 until the Second World War, was the only time in naval history all major powers competed in ships of relatively constant displacement and armament. They were the subject of continuous debate. Considered by some to be overgunned, they were criticized for lack of cruising radius or firepower endurance--depending on whether national objectives required devoting stowage capacity to a large fuel supply or to eight inch ammunition. They were criticized for being an offensive rather than a defensive weapon, because they placed "aggressive armament on undefended hulls."³⁷ No one liked them, but everyone felt impelled to build them.

The major naval powers came to the conference table four times in fifteen years because they feared the results of escalating naval competition, and they wanted to economize on defense spending. The economic factor

was an important prime mover in the agreements reached in 1921 and in 1930, and it is an important influence today, with costs of strategic weaponry skyrocketing.

The attitude of the United States towards military spending is epitomized by the naval race in Treaty cruisers. Ships were authorized, but obtaining the appropriations was quite another matter. The United States Congress, despite numerous warnings from the Navy, could see no threat to our security. In consequence, funds for increased armaments were slow in coming. By 1930, only eight years after signing the Washington Treaty, the United States had fallen drastically in naval strength.

Japan, on the other hand, came to the London Conference in 1930 in a strong position, having built a navy as large as her own resources and the Washington Treaty would allow. Japan left London confirmed in all of her Treaty cruisers built and building. The lesson here is clear: in arms limitations conferences the powers will tend to agree on limitations for the future, retaining the weapons in which they have already invested. Weapons in being and under construction are bargaining power at the conference table. Only when none of the contracting powers feel that their security is menaced (as at Washington, right after a world war),

will they consent to actual disarmament.

None of the three treaties of the twenties and thirties were greeted with enthusiasm by the naval experts, but at least the first two did lessen international tensions, and even perhaps postponed a major war. The danger is that any agreements reached on limitations in armaments are always viewed through rose-colored glasses, with little regard for political and military realities. Said one editor in 1930: "The London Treaty may be termed a business agreement among nations that have come to recognize the futility of naval competition in this modern day."³⁸ Alas, we never learn.

No provisions were made for insuring that the contracting powers would abide by the limitations of the treaties. In some areas there was no need to check-- it is difficult to conceal the launching of a 35,000 ton battleship. But displacements could not be verified, and the treaties were repeatedly violated. If vital national interests are at stake, a treaty must be verified to be valid. The naval race in Treaty cruisers also demonstrated that violation of one article of a treaty may conceal other, more insidious threats. Thus an increase in displacement over the 10,000 ton limit of a cruiser also meant that the ship would be faster, better armed, and have better protection than its

contemporaries.

The Second World War showed clearly that the most carefully worded arms limitation agreement cannot suppress bold and intelligent innovation. The Japanese Navy perfected the deadly "Long Lance" torpedo after World War I, and equipped all of their Treaty cruisers with at least eight tubes. During modernization and refit, additional tubes were added to most of the Japanese cruisers. At the same time, the United States, with a different conception of how the war at sea would be fought, removed the torpedo tubes from all its Treaty cruisers.³⁹ Military planning cannot be permitted to stagnate behind the shield of an arms limitation agreement.

A final point was emphasized in each of the three naval treaties, principally by the United States and Great Britain. Time and again, these nations, possessors of the two most powerful navies in the world, demonstrated their desire to reach equitable solutions to trying problems by making concessions to each other and to lesser powers. The late Dean Acheson, in an article on the present Strategic Arms Limitations Talks, pointed out that international crises do not come on us suddenly; rather, they gather and form slowly over the years. This was certainly true of the shifting balance of naval

power between the two world wars. Through three difficult treaties and two abortive conferences, the attitude of the United States government changed from a sincere wish for extensive world disarmament to a last ditch effort to slow an accelerating naval race by selective limitations. "As in all bargaining," Mr. Acheson said, "the side more eager for agreement will pay more to get it."⁴⁰


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FOOTNOTES

1. Raymond G. O'Connor, Perilous Equilibrium (1962), p. 7.
2. Oscar Parkes and Maurice Prendergast, eds., Jane's Fighting Ships, 1921 (1922), p. 62.
3. Ibid.
4. H. G. Thursfield (Captain, R. N.), "The Function of the Cruiser in Relation to Imperial Needs," The Journal of the Royal United Service Institution (February 1927), p. 102.
5. Ibid.
6. Francis E. McMurtrie, ed., Jane's Fighting Ships, 1941 (1942), p. 458.
7. Oscar Parkes, Ships of the Royal Navy (1922), p. 56.
8. Ernest Andrade, Jr., "United States Naval Policy in the Disarmament Era, 1921-1937." (Unpublished Ph.D. dissertation, Michigan State University, 1966.) p. 87.
9. Ibid. p. 62. It is interesting to note that once all limitations on size of cruisers had been discarded during World War II, the United States Navy's largest (14 ships) and most successful class of heavy cruisers displaced 13,600 tons. This was the Baltimore class.
10. For the purpose of this discussion, the "Treaty" cruiser is defined as a warship built between 1922 and 1939 mounting 7.9-inch (200mm) or 8-inch (203mm) guns. Many so-called "Treaty" cruisers varied from the 10,000 ton limit by $\pm 20\%$.
11. A. J. Watts, Japanese Warships of World War II (1966), pp. 25-27.
12. The Pensacola, laid down in October 1926, was completed in 40 months; but the Salt Lake City, laid down eight months later, was actually completed in December 1929--an unexpectedly fast 29 months.

13. US Congress, Senate, Committee on Naval Affairs, Navies of the World, 71st Cong., 3rd sess., (1931), p. 3.
14. H. T. Lenton, American Battleships, Carriers, and Cruisers (1970), p. 54.
15. Francis E. McMurtrie, ed., Jane's Fighting Ships, 1940 (1941), p. 479.
16. The Tuscaloosa displaced 9,975 tons, and the last two ships of the class, Quincy and Vincennes, displaced 9,375 and 9,400 tons, respectively.
17. "Comparison of French, English, and Italian Cruisers," Professional Notes, US Naval Institute Proceedings (November 1928), p. 1001.
18. Francis E. McMurtrie, ed., Jane's Fighting Ships, 1941 (1942), p. 247.
19. US Department of State Publication 8441, Treaties and Other International Agreements of the United States of America, 1776-1969, Volume 2, Multilateral, 1918-1930 (May 1969) p. 1068.
20. Henry W. Forbes, The Strategy of Disarmament (1962), p. 30.
21. "The Armored Cruiser Type," The Canadian Military Gazette (March 13, 1934), p. 5.
22. William F. Halsey (Captain, USN), "Japan's Attitude at the Forthcoming Naval Conference," Memorandum for the Assistant Commandant, US Army War College (May 5, 1934) p. 13.
23. A concession to the British, who saw no further requirement for large cruisers.
24. Aldo Fraccaroli, Italian Warships of World War II (1968) pp. 25-29.
25. Masanori Ito, The End of the Imperial Japanese Navy (1956), pp. 13-14.
26. Watts, pp. 25-27.
27. Ito, p. 14.

28. US Navy Department, Intelligence Division, Office, Chief of Naval Operations, Development of Heavy Cruisers After the World War (June 1936), Report of US Naval Attache, Berlin, p. 2.
29. Samuel E. Morison, The Two-Ocean War (1963), p. 6.
30. Halsey, quotation of article in Gendai, p. 7.
31. Ito, p. 18.
32. Kichisaburo Nomura (Adm, IJN), "Japan's Demand for Naval Equality," Foreign Affairs (January 1935), p. 197.
33. Watts, p. 84.
34. Ibid., p. 93.
35. McMurtrie, Jane's Fighting Ships, 1941, pp. 297-300.
36. J. C. Taylor, German Warships of World War II (1966), pp. 16-18.
37. "Cruiser Types", US Naval Institute Proceedings (October 1928), p. 907.
38. "The London Naval Treaty," The Military Engineer (September-October 1930), p. 423.
39. Morison, p. 13.
40. Dean Acheson, "The Hidden Crisis," The Impact of the Changing Power Balance, Committee on Government Operations, US Senate (1971), p. 17.

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