Its Greatest Defense and Ornament: The Royal Navy on the Eve of the Second World War

"The royal navy of England hath ever been its greatest defense and ornament"
-Sir William Blackstone 1723-1780

The Royal Navy appeared to be a formidable force on the eve of the Second World War, more than a match for anything the *Kriegsmarine* could throw at it. However, this impression was illusory. Many of the RN's ships were obsolescent, under-gunned, and in need of refit. Even more important, the Royal Navy was not prepared to meet the threat of what would become Nazi Germany's most lethal naval weapon - the U-boat. Some critics suggest that it was the fault of the Admiralty, whose members were still fighting the Battle of Jutland. Some point the finger at political naivety and Prime Minister Neville Chamberlain's policy of appeasement. However, on closer examination, the Royal Navy's less than ideal fighting capability at the start of World War II was due to a number of reasons, all of them complicated. The main cause was rooted in financial constraints, but other factors included disarmament, over-commitment, inter-service rivalry, faulty planning, and the erosion of Britain's armaments industries during the inter-war years.

Historians have provided a number of explanations as to why the Royal Navy was not as prepared for the war as it should have been. All of them look at the immediate post World War I period for the roots of the RN's difficulties. Geoffrey Till, the Head of the Department of History and International Affairs at the Royal Military College, attributes much of the decline in the RN's capabilities to the "parsimony of the Treasury" and its adherence to the Ten-Year-Plan, introduced in 1919. [1] This plan was predicated on the premise that there would be no major war within ten years,

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[1]Geoffrey Till, *Retrenchment, Rethinking, Revival 1919-1939,* The Oxford Illustrated History of the Royal Navy, Edited by J. R. Hill (Oxford: Oxford University Press, 1995), p. 320.

and as a result, naval estimates declined by over one-third from 1920 to 1932.[2] Consequently, the quality and quantity of ship construction degenerated, as did training and personnel. Furthermore, Till suggests that inter-service rivalries, not only for funds but for control of forces, also played a part. A prime example was the fight between the Navy and the Air Ministry over the ownership of naval aviation.

Till refutes the assertion that the Admiralty was negligent in its preparation for convoy protection. He points out that the U-boats had been defeated in WWI, and the development of Asdic supposedly negated the threat. Furthermore, it was not known that Germany did, in fact, have U-boats until 1935, after which time escort construction was undertaken. The main threat was seen to be surface raiders, and the navy had constructed 70 cruisers to counter this menace. In addition, says Till, much effort was expended developing the naval management of shipping, such as the command and control of the convoy system, in the event of a war with Germany.[3]

Antony Preston, the former Naval Editor of *Jane's Defense Weekly* and the author of many naval histories and articles, raises the issue of the Singapore naval base, and suggests that it was the nightmare of a two-front war that prompted the Admiralty to invest so heavily, to the detriment of the fleet, in the base.[4] He also contends that even when the British government finally did start serious rearmament in the mid-1930s, much of the armament and shipbuilding industries were gone.

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[2]Ibid.

[3]Ibid., pp. 341-2.

[4]The History of the Royal Navy in the 20th Century, Edited by Antony Preston (Greenwich, CT: Bison Books Corp, 1987), p. 83.

He concludes that it was this industrial void that was the biggest impediment in rebuilding British military strength.[5]

Peter Kemp, the former Naval Librarian and Head of the Naval Historical Branch of the British Ministry of Defense, contends that with the aspirations of United States Navy and the Imperial Japanese Navy coming to fruition during the Great War, and the severe financial limitations placed on it post war, Britain had no choice but to abandon its long-held Two Power Standard. This standard called for the Royal Navy having the strength of its two nearest rivals. After World War I, Britain just did not have the wherewithal to build on a par with the US and Japan.[6]

Of course, equipment, technology, and planning were not the only casualties of the inter-war years; personnel suffered a great deal, too. However, Captain John Wells, in *The Royal Navy: An Illustrated Social History*, maintains that by the time war was declared in 1939, much of the damage done to morale in the immediate post war period and the early 1930s had been repaired. He asserts that by the outbreak of the war, most members of the Royal Navy considered the service as "one big bureaucratic family."[7]

Faulty naval planning has also been blamed for the Royal Navy's unpreparedness on the eve of the Second World War. Possibly the best book on this subject is *Naval Policy Between the Wars Volume II* by Stephen Roskill. Roskill, best known for *The War at Sea*, the official history of the Royal Navy in World War II, rejects the common assertion that the Admiralty was caught flat-footed

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[5]Ibid.

[6]Peter Kemp. History of the Royal Navy (New York: G P Putnam's Sons, 1969), p. 212.

[7]Capt. John Wells, The Royal Navy: An Illustrated Social History 1870-1982 (Phoenix Mill: Alan Sutton, 1994), p. 164.

when it came to protection of seaborne trade. He does admit that, while the Admiralty recognized that losses would be severe, it felt that U-boats were not the threat they had been in 1917. According to Roskill, the Admiralty was satisfied with the state of affairs as far as convoy protection was concerned.[8] Roskill also examines the problem with personnel, particularly the officer cadre. The rapid expansion of the fleet in the mid 1930s exposed the lack of foresight exhibited in the previous years concerning the retention of officers and trained personnel.

Rearmament really did not start in earnest until after the Munich Crisis of 1938, and this and the place of the capital ship in naval planning are the subjects of Joseph Moretz's *The Royal Navy and the Capital Ship in the Interwar Period*. Moretz examines Imperial naval policy, the influence of arms control and the Treasury on the RN, and naval strategy between the wars. While his main concern is with capital ships and their construction, reconstruction, and employment, he does make the interesting observation that, after the formation of the Committee of Imperial Defense in the early 1920s, the office of First Lord of the Admiralty was increasingly held by second string politicians.[9] Of particular interest are the appendices, the first of which charts naval estimates from 1918 to 1939. Contrary to popular belief, estimates remained stable during most of the inter-war period, almost doubling during the 1930s.[10]

Rearmament is also the subject of G. A. H. Gordon's *British Seapower and Procurement Between the Wars*, published in 1988. Gordon contends that appeasement was actually "a traditional

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[8]Ibid.

[9]Joseph Moretz, The Royal Navy and the Capital Ship in the Interwar Period (Frank Cass Publishers: London, 2002), p. 35.

[10]Ibid., pp. 256-7.

policy based on concessions made from a position of strength."[11] However, in the pre-World War II situation, it was not utilized from such a position, and proved to be only an excuse for the government of Neville Chamberlain to "avoid the definite assumptions necessary for the establishment of clear long-term defense requirements."[12]

David Reynolds also examines Britain's defense policy between the wars. Reynolds teaches International History at Cambridge University, and in *Britannia Overruled*, he concludes that British defense policy in the years leading up to the Second World War was the same as that leading up the Great War. In the event of war, Britain expected the French army to give it time to rearm and mobilize the military might of the empire.[13]

As can be seen, historians have suggested a number of reasons behind the Royal Navy's unpreparedness to fight the kind of sea war it fought during World War II. Most dismiss the age-old complaint that the old warriors running the Admiralty were preparing to re-fight the battles of the First World War. All contend that there was no single factor but the culmination of many, including financial constraints, disarmament, over-commitment, inter-service rivalry, faulty policy, and the diminishment of the country's armament industries during the inter-war period.

Britain emerged from World War I victorious but financially exhausted. It had fought the war on credit, mainly to the United States, and by 1920 was staggering under a total public debt of

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[11]G. A. H. Gordon, British Seapower and Procurement Between the Wars (London: Macmillian Press, 1988), p. 155.

[12]Ibid., p. 168.

[13]David Reynolds, Britannia Overruled, 2nd Edition (Harlow: Pearson Education Ltd., 2001), p. 134.

£8,000,000,000, up from £620,000,000 in 1914.[14] Despite something of a post war boom, Britain's economy was still sluggish. The loss of many of the country's overseas markets had a dramatic effect on the its manufacturing sector. Before the war, Britain relied on oversea markets for 45% of its sales, 75% in the case of textiles and roughly one third of its sales of iron and steel.[15] However, countries that had formerly been dependant on British exports, such as Canada and Australia, had become more self-sufficient during the war. Furthermore, the United States and Japan took advantage of the disruption in European trading patterns to foray into those traditionally British markets.[16] By 1920, British exports were down 30% from prewar levels.[17] The British government, without any real plan for restructuring the economy to the new national and international economic environment, relied on traditional methods to restore "normality and stability."[18] However, the balanced budgets, free trade and the restoration of the gold standard did not have the desired effects and export sales of staple commodities continued to fall. By 1925, coal was down to 7% of exports, while cotton fell to 25%, and just 20% of exports by 1929.[19] With the stock market crash on Wall Street in 1929, the British economy, like all European economies, took a steep dive.

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[14]Peter Clarke, Hope and Glory (London: Penguin Books Ltd., 1996), p. 128-9.

[15]Keith Robbins, The British Isles 1901-1951 (Oxford: Oxford University Press, 2002), p. 177.

[16]Ibid., p.177.

[17]Ibid.

[18]Ibid.

[19]Peter Clarke, Hope and Glory, p. 130.

The financial panic in the US led to a worldwide financial crisis that prompted a significant decline in world production. To protect their own markets, countries started to close their borders to outside trade, and governments cut budgets and reduced spending. The British government followed suit. Unfortunately, such tactics did not have the desired effects and unemployment in Britain went from 10.4% of the insured workforce in 1929, to 16.1% in 1930, 21.3% in 1931 and a staggering 22% - 2.8 million people- in 1932.[20] As Peter Clarke observes in *Hope and Glory*, not only did these numbers generate concern for the plight of the unemployed but also for the country's ability to continue supporting them.[21] The Chancellor of the Exchequer during this period was future Prime Minister Neville Chamberlain.

Britain's financial situation was "a most immediate and pressing concern" when Chamberlain assumed the mantle of the country's chief financial officer in 1931.[22] Drastic measures were needed and Chamberlain's first order of business was to take Britain off the gold standard. The Bank of England had been disposing of its gold reserves in ever increasing amounts in a vain attempt to support the pound. However, without any cooperation between the other major economies, mainly France and the US, who were doing the same, this did not have the desired effect.[23] As a result, Chamberlain had little choice but to abandon the gold standard altogether. Protection of home markets was his next target, and on February 4, 1932, he introduced his complete tariff reform bill,

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[20]W E Alford, Britain in the World Economy Since 1880 (London: Longman Group Ltd., 1996), p. 137.

[21]Peter Clarke, Hope and Glory, p. 130.

[22]William R. Rock, Neville Chamberlain (New York: Twayne Publishers Inc, 1969), p. 86.

[23]Alford, Britain in the World Economy Since 1880, p. 137.

imposing a 10% duty on all imported goods except those specifically exempted. His first budget was equally as grim as his tariff reform. There was no tax relief, and drastic cuts in unemployment benefits were introduced to help balance the national expenditures. The economy did grow as Britain reoriented her economy to rely more on the home market rather than the international one. Traditional industries such as textiles and coal continued to declined in favour of newer industries such as automobiles and electrical appliances, and low interest rates also prompted the construction of new housing. Between 1932 and 1937, real national incomes increased by 20%, industrial production by 46%, and employment by 17%.[24]

This concentration on home markets also translated into military policy as the protection of empire trade took centre stage. The economy was seen as the "fourth arm of defense"and more than ever, it was important to maintain the trade routes between Britain and the other members of the British Empire.[25] The policy of "limited liability" on the continent shrunk to none at all, and the cornerstone of British defense policy once again became the Royal Navy.[26]

At the end of World War I, the Royal Navy really did rule the waves. Unfortunately, it was holding on by the skin of its teeth. The United States and Japan had emerged from the Great War with their own formidable navies, and the US indicated that it was going to continue to grow, setting its sights on a navy "second to none." Before the war, the RN had held to the Two-Power Standard, but in its financial exhaustion, and facing the two emerging world powers - the United States and Japan - Britain had no choice than to abandon this doctrine and bring in the Ten-Year-Rule.

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[24]Gordon, British Seapower and Procurement Between the Wars, p. 161.

[25]Reynolds, Britannia Overruled, p. 125.

[26]Ibid.

The Ten-Year Rule, approved by Cabinet on August 15, 1919, assumed that there would be no major war within ten years.[27] Considering the state of the world at the time, this was a fairly reasonable doctrine. It was renewed in 1928, but lapsed in 1932, and was finally abandoned in November 1933 after the Japanese had invaded China.[28] In the interim, this strategy gave the Treasury the power to ruthlessly cut naval estimates, which it did dramatically in 1919. The end result was a drastic decrease in naval construction and modernization. During the 1920s, the only battleships completed were the *Nelson* and *Rodney*, and the modernization of those remaining, particularly with modern anti-aircraft defenses and armor plating, was slow. Most of the older R and S class destroyers were scrapped, and many of the modern cruisers built during the Great War were mothballed in favour of the older coal-burning models more suited to North Sea exercises.[29] Naval aviation also faced difficulties at this time.

At the end of World War I, Britain was far ahead of its rivals in naval aviation. However, by the 1930s, the Americans and Japanese had outpaced them. For one thing the RN had lost all its aircraft and naval pilots to the Royal Air Force shortly after the war, with the result being that the RN controlled the carriers but shared aircraft jurisdiction with the Air Ministry. Furthermore, with the post war obsession with bombers - and fighter aircraft to intercept them - very little development went into naval aircraft. As a result, the RAF could field Spitfires and Hurricanes, whereas in 1939 the standard aircraft operating off Britain's carriers were the bi-winged Fairley Swordfish, affectionately called the "Stringbag." It was not until the late 1930s that the Royal Navy regained full

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[27]Ibid., p. 115.

[28]Till, *Retrenchment, Rethinking, Revival*, p. 319.

[29]Preston, History of the Royal Navy in the 20th Century, p. 75.

control of naval aviation, but by then the American and Japanese navies had developed advanced forms of aircraft and doctrines for carrier warfare.

Of course, battle readiness suffered greatly as a result of the financial constraints placed on the Admiralty. Reductions in fuel allowances and ammunition prevented large scale fleet maneuvers and live-fire exercises, which led to a false sense of optimism among naval officers as to the air defense capabilities of warships and the security of the sea lines of communication.

Naval personnel also felt the burden of the post war financial crisis. By 1932, naval personnel had plummeted to 89,600 from 380,000 in 1919.[30] This reduction was not gradual, nor gentle. "Geddes' Axe" named after Sir Eric Geddes, Chairman of the Committee on National Economy, slashed 2,000 men from the officer corps from 1921-22, including approximately one third of the captains' list.[31] The lower deck was not spared either. Naval pay had been brought in line with that ashore in 1919, but in 1925, with the downturn in the economy and with over two million people unemployed nationally, these rates were reduced for new entrants. Of course, this led to considerable dissatisfaction whereby two sailors of the same rank, doing the same job, could be paid different rates. This disparity came to the fore in 1931, when the Admiralty decided to reduce the pay of those men on the 1919 pay scale. This led to what was termed the Invergordon Mutiny, whereby much of the Atlantic Fleet was held in port as a result of a sit-down strike by disaffected seaman. While the incident was a huge embarrassment for the Admiralty, and contributed significantly to Britain's coming off the gold standard, the real significance was that it demonstrated in the widening gap

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[30]Till, *Retrenchment, Rethinking, Revival 1919-1939*, p. 320.

[31]Ibid., p. 321.

between officers and the ordinary men.[32] Admittedly, officers' pay was also reduced, but the proposed cuts were nowhere as deep as those to be imposed on the lower ranks. As a result, the men felt that they were being asked to bear greater sacrifices than the officers.[33]

Another serious repercussion of the financial crisis was the effect it had on the size and composition of the Naval Staff, the policymaking body of the Royal Navy. By the late 1920s, the Naval Staff was down to approximately 60 officers from 330, ten years previously. With the daily fight to ward off more funding cuts by the Treasury, most of these officers had little time for planning and policymaking.[34] Consequently, many innovations, both technological and doctrinal, were left unexplored by the RN at a time when its nearest rivals were breaking new ground in naval warfare.

Of course, all this cost-cutting was not done under the naive impression that the Great War really was "The War to End All Wars." All the while Britain was pruning its naval forces, it was trying to convince the other major powers to do the same. British public opinion was firmly behind disarmament, and while the term "appeasement" now has negative connotations, it enjoyed wide public support in the inter-war years.[35] The British public did not want another war, and were convinced that "covert diplomatic agreements" had caused the Great War.[36] Weapons were seen as

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[32]Wells, The Royal Navy: An Illustrated Social History 1870-1982, pp. 145-147.

[33]Ibid., pp. 141-3.

[34]Till, *Retrenchment, Rethinking, Revival 1919-1939*, p. 322.

[35]Frank McDonough, Hitler, Chamberlain and Appeasement (Cambridge: Cambridge University Press, 2002), p. 36.

[36]Gordon, British Seapower, p. 72.

contributing to war, not deterring it, and people who promoted the maintenance of a strong defense force were vilified as "militarists."[37] Nearly one million men had been killed in the war, and another two million wounded and/or disabled, and the pacifist sentiment held strong really up until after the Hitler threw aside the Munich Agreement and invaded Czechoslovakia in early 1939. This attitude reached its peak in the mid-1930s with the so-called "Peace Ballot" whereby 11.6 million Britons voted for an agreement on arms reduction and a ban on the production of arms for profit.[38] As Frank McDonough points out in *Neville Chamberlain, Appeasement and the British Road to War*, the inter-war years were the "golden age" of the peace movement, with over fifty pacifist societies in existence, including the Peace Pledge Union, the No More War Committee, and the Peace Society. The general consensus was that war was "useless, wasteful, costly, and should be opposed."[39] The "costly" aspect played heavily with public opinion, considering the tough financial times the country was going through, and the average voter wanted what funds that were available to be spent on social services - pensions, insurance, healthcare and education - not planes and ships and bombs. This became an essential factor in a government staying in power. [40] Consequently, disarmament became the catchphrase of the era, and the first attempt to impose some sort of rational restrictions on the size of the world's navies was the Washington Conference of 1921.

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[37]Ibid.

[38]Reynolds, Britannia Overruled, p. 116.

[39]Frank McDonough, Neville Chamberlain, Appeasement and the British Road to War (Manchester: Manchester University Press, 1996), p. 99-100.

[40]Gordon, British Seapower, p. 73.

The aim of the conference was to restrict the maximum overall size of the world's major navies, specifically Great Britain, the United States, and Japan, but also including France and Italy. After much harsh negotiation a final ratio of 5:5:1 for the former, and 1:75 for the latter two, was agreed upon.[41] Also, within the agreement were provisions limiting the size and armament of some classes of warships, and the construction of new ones.[42] To the chagrin of many in the Royal Navy, Britain and the United States were forced to scrap some of their older battleships to keep within the tonnage requirements set down. Additional talks were held in 1927 in Geneva to further reduce naval forces, but even more so, to outlaw submarine warfare all together. However, French intransigency defeated this suggestion. The London Conference of 1930 endeavoured to impose a moratorium on battleship construction until 1937, but Japan made it clear that it had no intention of living up to any such agreement.[43] Japanese leaders had always felt aggrieved by the 5:5:3 ratio (some said Cadillac, Cadillac, Ford) worked out in Washington, and the country already had aspiration of expanding its empire in Asia and the Pacific.[44]

After the Nazi assumption of power in 1933, and Hitler's admission that Germany was rearming, the *Kriegsmarine* once again became a British concern.[45] To this end, the Anglo-German Naval Agreement was signed in 1937. While the Admiralty really did believe that Hitler would fully

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[41]Till, *Retrenchment, Rethinking, Revival 1919-1939*, p. 326.

[42]Moretz, The Royal Navy and the Capital Ship in the Interwar Period, pp. 69-72.

[43]Stephen Roskill, Naval Policy Between the Wars (London: Wm.Collins Sons & Co. Ltd., 1976), p. 26

[44]Ibid.

[45]Gordon, British Seapower and Procurement Between the Wars, p. 157.

abide by the agreement - and he did not - the agreement gave the Royal Navy time to rebuild its forces.

Over-commitment was also a factor affecting the Royal Navy's capabilities. During the inter-war period, Britain became embroiled in a total of five major crises. The first was the War of Intervention in Russia in 1919. In the Baltic Sea, the Royal Navy defended positions ashore, bombarded Bolshevik forces, and transported troops and refugees. It found it had a talent for small gunboat action, and engaged the enemy on the River Dvina, in the Caspian Sea, and the Onega and Bailkal Lakes in Siberia. The Royal Navy was also involved in Turkey from 1919-23, evacuating refugees, protecting troops on shore, and supporting them when they took major parts of Constantinople to prevent it from falling into nationalist hands. Britain, of course, also became involved in the League of Nations efforts to deter Mussolini's aggression in Abyssinia. The Mediterranean Fleet was reinforced and went to full readiness at its base in Alexandria, Egypt. Regardless, nothing short of a blockade of Italy, with its incumbent risk of full scale war, could alter Mussolini's plans and, in the end, Mussolini's forces entered Addis Ababa on May 5, 1936.[46]

Britain was not idle during the Spanish Civil War, although certainly nowhere near as involved as the Germans and Italians. The United Kingdom's official contribution was naval, with the RN escorting British merchantmen, repelling challenges by Republican warships and Italian submarines, and rescuing crews of sinking ships. This constant commitment put a tremendous strain

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[46]In fact, First Sea Lord, Admiral Chatfield, stated privately in 1935 that he had "no objections to the Italians being established in Ayssinia" because it would make them more vulnerable to British Sea power.
Gordon, British Seapower and Procurement Between the Wars, p. 157

on both men and equipment, but the Admiralty felt that the lost of even one capital ship for refit could alter the balance of power.[47] This was nowhere as worrisome to Britain than in the Far East.

In July 1937, Japanese and Nationalist troops clashed at the Peking Bridge, and as incident after incident followed, the RN was required to organize large-scale evacuations of British citizens from Shanghai. Shortly thereafter, British gunboats were bombarded from the air and ashore, and by 1939, the British mission at Tientsin was being menaced. It was Japanese aggression in Manchuria in 1931 that suggested to the British early on that the Japanese were a threat in the East. However, under both financial and treaty limitations, the Royal Navy just did not have the assets to maintain a major fleet in the Pacific, and this led to the, arguably, misguided development of the Singapore naval base.

The Admiralty had recognized the threat the Imperial Japanese Navy posed to its Far Eastern territories, and concluded that a major fleet needed to be based in the East.[48] Financial constraints prohibited a permanent Far Eastern Fleet, so the strategy developed that the Mediterranean Fleet would be the "strategic centre of gravity" detaching units west to the Home Fleet or east to the Pacific Ocean as circumstances warranted.[49] However, to accomplish this, Britain needed a major repair and re-victualing station in the Far East. The concept was that, in the event of Japanese aggression, the Singapore-based forces would fight a holding action while reinforcements sailed from the Mediterranean. Unfortunately, other than this rather vague strategy, no other concrete plan was formulated, and as construction of the base continued in fits and starts throughout the 1920s, the

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[47]Preston, History of the Royal Navy in the 20th Century, p. 79.

[48]Till, *Retrenchment, Rethinking, Revival 1919-1939*, p. 328.

[49]Ibid.

period projected that Singapore would have to hold out increased from 42 to 90, finally to 180 days.[50] As a result, the base became a financial drain on naval funds throughout the 1920s and 30s, and it was not until Germany and Japan signed the Anti-Comintern Pact, and war with Germany appeared imminent, that a concentrated effort was put on to complete the base. Despite this, when the Japanese did attack Singapore in 1941, the base was incomplete and defenses inadequate.[51]

Inter-service rivalry was one of the reasons Singapore defenses were deficient. The fight to maintain funding, and a creditable fighting force, throughout the inter-war years pitted service against service.[52] Overall, the navy faired the best, the army the worst. As a result, the bitterest fighting was between the RN and RAF. The most rancorous was the loss of the Fleet Air Arm to the RAF shortly after World War I. With this, the Royal Navy was divested of not only 60,000 flyers, but more important, the future air planners and strategists needed to compete with the American and Japanese naval air arms. A small Fleet Air Arm was reinstated in 1921, but under a "Dual Control System," which did little to ferment harmony between the Admiralty and the Air Ministry in the development of a creditable naval air service. Starved for funds, the navy concentrated on building modern carriers, and the Air Ministry fought for bomber aircraft and fighters. Little was left for the development for carrier capable airplanes for the Fleet Air Arm. Consequently, whereas the Americans and Japanese were flying advanced fighter aircraft off their fast attack carriers, the FAA had to contend with biplanes. Singapore was also a victim of this inter-service rivalry. When it came to defenses, the three services argued over the type and disposition of the bases defenses. The RAF

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[50]Ibid.

[51]Moretz, The Royal Navy and the Capital Ship in the Interwar Period, pp. 40-41

[52]Till, *Retrenchment, Rethinking, Revival 1919-1939*, p. 323.

argued for the assignment of torpedo aircraft as the main defense force, whereas both the army and navy maintained that guns ashore were more practical.[53] Even then, there was dissension as to where an attack would originate - from the sea or from land. In each's continuing efforts to gain the maximum funding, a clear strategy was not forthcoming.

The Royal Navy has often been accused of spending the inter-war years preparing to re-fight the Battle of Jutland, rather than properly planning for the protection of the lines of communication. This is not quite true. According to Geoffrey Till, the RN wanted to make sure the Battle of Jutland would not happen again.[54] Will argues that all operational scenarios were practiced, including divisional and night fighting tactics, and communications improved to prevent just the kind of confusion and mis-communication that occurred at Jutland. However, to the RN, the capital ship still remained the battleship, and command of the sea was still built around it. Following the theories of Alfred Thayer Mahan and Sir Julian Corbett, the RN accepted that one had to win control of the sea before one could properly defend or attack trade. This became the Royal Navy's first duty.[55] With this in mind, the Admiralty considered that the biggest threat to the sea lines of communication would be surface raiders, not submarines. As a result, defense of convoys was seen more the job of cruisers and destroyers, ships that would have enough firepower, either individually or in company, to ward of attacks by all except the enemy's capital ships. If more firepower was required, the heavy units of the Home Fleet could be sortied. To this end, 70 medium and heavy cruisers were built, plus the A and I class destroyers, and the powerful Tribal class "mini-cruiser." However, these were all

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[53]Moretz, The Royal Navy and the Capital Ship in the Interwar Period, pp. 40-41

[54]Till, *Retrenchment, Rethinking, Revival 1919-1939*, p. 343.

[55]Ibid., p. 341.

designed with fleet operations in mind and were deficient in anti-aircraft and antisubmarine capabilities.

Arguably the most serious casualty of the inter-war years was the defense industry itself. The years of disarmament and downsizing during the 1920s and early 1930s seriously compromised Britain's industrial capacity to respond to rearmament when it came in the mid-1930s. Many larger shipyards, like Palmers and Beardmore, had closed during the period due to lack of orders. Others, like Vickers and Armstrong, had amalgamated to survive, but still, the large pool of skilled workmen needed for such industries had dispersed. [56] The Admiralty had tried to preserve the more specialized parts of the industry, such as armour makers and optics manufacturers, through the judicious placement of orders, but earlier economies came at the price of production difficulties when rearmament was resumed.[57] As a result, ship construction took much longer in Britain than it did in the United States, Germany, or Japan, countries that had not lost their defense industries. For example, the two 35,000 ton King George V class battleships, *King George* and *Prince of Wales*, took five years to build and had to settle for 14-inch guns whereas comparable American warships took just three years and boasted 16-inch guns. Significantly, the British steel industry was so over extended that the armour plating had to be procured from Czechoslovakia.[58] This situation affected all branches of the military, and consequently, even though by the Spring of 1939 Britain was spending more on defense than it had at the height of the Great War, rearmament progressed at a much slower pace than anticipated.

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[56]Gordon, British Seapower and Procurement Between the Wars, pp. 77-80.

[57]Ibid., 80-81.

[58]Preston, History of the Royal Navy in the 20th Century, p. 111.

Regardless of these difficulties, the Royal Navy was still a formidable force on the eve of the Second World War. When First Sea Lord Winston Churchill sent the order out to His Majesty's ships to commence hostilities against Germany on September 3, 1939, Britain's naval assets in the North Atlantic consisted of five battleships, two battle cruisers, two carriers, twelve cruisers, seventeen destroyers, seven large minesweepers plus two submarine flotillas.[59] There was also the Channel Force of two battleships, two carriers, three cruisers, and nine destroyers.[60] Britain had superiority in ASDIC equipped escorts to Germany's U-boats - almost four to one - but the ratio of merchantmen, the U-boats' targets, to escorts was a daunting twenty to one. Considering the size of Britain's merchant marine, and its dependence on it for survival, perhaps this is where the Admiralty can be found at fault.

Britain was as dependant upon imports for survival at the beginning of WWII as it had been at the start of WWI.[61] The country still relied heavily upon its overseas empire, and imported approximately fifty-five million tons of goods per year - all its oil, and half its food and raw materials for its industry.[62] The Merchant Navy contained 160,000 men, including 4,500 masters, 13,000 officers and 20,000 engineers, and numbered approximately 3,000 oceangoing and 1,000 larger coastal vessels, totalling 21,000,000 tons of shipping. At any one time, 2,500 British merchant vessels were at sea.[63] Despite its size, however, the British Merchant Navy could carry only three-

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[59]Dan van der Vat. The Atlantic Campaign, (New York: Harper & Row, 1988), p. 165.

[60]Ibid., p. 164

[61]Ibid., p. 167.

[62]Dan van der Vat, Stealth At Sea (Boston: Houghton Mifflin Company, 1995), p. 167.

[63]Ibid.

quarters of the country's imports. The remainder was supplied by foreign hulls. For the Admiralty, protection of Britain's vital lifelines, as represented by its merchant fleet, proved to be a prodigious task, especially given the escort to merchant ship ratio. As a result, the Admiralty sought other means to protect the ships from attack.

As previously mentioned, the risk of U-boat attack was thought to be minimal, the main threat considered to be surface attack. To this end, the Admiralty had revived its Trade Division in 1936, and a year later appointed a Shipping Defence Advisory Committee with liaison officers to instruct the Merchant Marine in defensive measures. By the beginning of the war, 10,000 officers had undergone training - 2,000 in gunnery - and 1,500 seamen had been instructed on how to serve guns.[64] With war clouds forming on the horizon, the Admiralty set up the Defensively Equipped Merchant Ship program whose task was to find and install old naval, anti-aircraft, and machine guns on merchant ships, as well as the personnel to man them. This was a daunting task considering that there were 5,500 such ships to be armed. Ultimately, this program would absorb 190,000 men from the Merchant and Royal Navies, plus the Royal Marines and even the army - more men than were contained in the prewar Merchant Navy. The Admiralty also did not forget the first naval lesson of World War I: the most effective way to protect merchant ships was to convoy them. They did forget the second: these convoys needed to be adequately protected. When war was declared, the RN was deficient in escorts, tactics, equipment, and trained antisubmarine officers.

The Admiralty persistently regarded surface raiders as being the main threat to trade rather than submarines. This was a reasonable assumption as it was the convoy/escort combination that had defeated the U-boats in World War I. In addition, in the inter-war years, the navy had developed

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[64]van der Vat, The Atlantic Campaign, p. 167.

ASDIC, named after the Anti-Submarine Investigation Committee, and now known as SONAR. This device acted on the premise that sound waves travel through water at a constant speed and when a sound beam hits a solid object it reflects back, again at a constant speed. By using the time lapse between sending the signal and receiving a return, it is possible to detect the direction and distance of an object. With the development of asdic, the RN now had a means of locating a submerged submarine. In its jubilation, the Admiralty in the form of First Sea Lord Admiral A. E. M. Chatfield had announced in 1936, that the RN's A/S measures were 80% effective.[65] Unfortunately, asdic had a few drawbacks. For one, it could not estimate the depth, so when attacking a submerged target, the attacking warship had to guess whether it was at 30 meters or 100. Furthermore, asdic often gave false targets, such as whales and large schools of fish. Be that as it may, Germany was not even supposed to have submarines under the terms of the Treaty of Versailles. Of course, this was not the case.

In defiance of the Versailles Treaty, and in utmost secrecy, Germany had started building U-boats as early as 1922. A submarine office had been set up in The Hague, under cover of a Dutch firm. Under the guise of designing and constructing submarines for foreign countries, *Ingenierskaantor vor Scheepbouw* set about producing prototypes for what would ultimately become the designs that would make up the reborn *Kriegsmarine*. Between 1928 and 1935, when Hitler "threw off the shackles of Versailles," they had produced nine submarines for Turkey, Finland, Spain, Russia, and Romania. With the 1935 Anglo/German Agreement, Germany was, once again, allowed to build U-boats on a par with Britain. Over the next four years, the *Kriegsmarine* perfected two main designs, the Type VII and the Type IX, with the former having the most dramatic evolution

[65]Roskill, Naval Policy Between the Wars., p. 227.

and ultimately becoming the workhorse of the Battle of the Atlantic. Significantly, more than seven hundred, of several variations, including tanker submarines, would be built. Just as important was the man in charge of Germany's U-boat force.

In 1935, Karl Dönitz was appointed *Führer der U-Bootes.* Dönitz had just finished a tour as captain of the training cruiser *Emden*, and had been a U-boat skipper during WWI. He had been sunk by the British in the Mediterranean at the end of the war and had spent some time interned in Britain. A career officer, he had rejoined the navy upon release and rose steadily through the ranks due to his "healthy ambition and outstanding leadership qualities."[66] In July 1935, he was ordered by the Commander-in-Chief of the German Navy, Admiral Eric Raeder, to Wilhelmshaven to take up the post as head of the new U-boat arm. Although not that enthusiastic at first, he threw himself into the task with typical zeal, and was soon pressing for the three hundred U-boats he determined were necessary for a successful commerce war against Britain.[67] At the same time, he started to develop what he would later call *Rudeltaktik,* or wolfpack tactics, whereby a number of U-boats attacked a convoy in unison on the surface.[68] Dönitz was aware of the British boast of asdic being 80% successful but was convinced that these new tactics could defeat it. He even published a booklet in 1939, called *Die U-booteswaffe* (The U-boat Arm), in which he states that the main aim of the U-boat was commerce warfare.[69] Unfortunately, the British did not obtain a copy of this book until

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[66]Peter Padfield, Dönitz: The Last Fuhrer (London: Victor Gollancz Ltd., 1984), p. 138.

[67]Robert Jackson, The German Navy in World War II (London: Brown Packaging Books, 1999), pp. 13-14.

[68]Padfield, Dönitz: The Last Fuhrer, pp. 158-160.

[69]Ibid, p.170.

1942, and by then the *Rudeltaktik* had proven its worth.[70] Regardless, when war started in September 1939, Dönitz only had 57 U-boats in commission, of which only 39 were *Frontboote* (front boats).[71] Unfortunately, the RN had just as few escort vessels.[72]

In 1930, there was a major review of the Royal Navy's ASW capabilities.[73] This review concluded that sloops, then being built at a rate of 2-3 a year, and older destroyers fitted with asdic, would provide a sufficient number of escorts for trans-Atlantic convoys. Where a weakness was seen was in coastal escorts, and it was considered that trawlers could be converted, or quickly built, for the task, supplemented by a purpose-built coastal escort. Initially, a few "coastal sloops" were constructed, but these proved to be too expensive to produce in large numbers. When the Admiralty finally "woke up" to the need for more escorts, they turned to Smith's Dock in Yorkshire, for help.

Dubbed the "Corvette" by Winston Churchill, the small warship was a derivative of the *Southern Pride*, a whale catcher. This design was seen as having the same characteristics needed for hunting U-boats - "seaworthiness, maneuverability, and rapid acceleration."[74] The "Flower class corvette" also had the significant advantage, considering the state of Britain's shipbuilding capacity, of being built quickly and cheaply from "over the counter" components in mercantile shipyards.[75]

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[70]Ibid., p. 171.

[71]V. E. Tarrant, The U-Boat Offensive 1914 - 1945 (Annapolis: Naval Institute Press, 1989), p. 81

[72]Till, *Retrenchment, Rethinking, Revival 1919-1939*, p. 340.

[73]David Brown, *Atlantic Escorts 1939-1945,* The Battle of the Atlantic 1939-1945, Stephen Howarth and Derek Law, Editors (London: Greenhill Books, 1994), p. 453.

[74]Mac Johnson, Corvettes Canada (Toronto: McGraw-Hill Ryerson, 1994), p. 3.

[75]Brown, *Atlantic Escorts 1939-1945*, p. 455.

The Admiralty, belatedly, placed its first order for these "cheap and nasties" with Smith's in July 1939. Unfortunately, although designed for inshore patrol duty, the necessities of war forced them into the stormy wastes of the North Atlantic as Britain's vulnerable sea lines of communication were subject to the ravages of Dönitz's U-boats.

The Battle of the Atlantic was the longest naval campaign in history and certainly the longest in World War II. Commencing September 3, 1939 with U-30's sinking of the *Athenia* off Scotland, the battle slogged on through five and a half years of unrelenting death and destruction, finally ending on May 7, 1945 with the sinkings of the Norwegian *SS Sneland I* and the British *SS Avondale Park* by U-2336. These were the last two ships sunk by U-boat in WWII.[76] In the interim thousands of ships were sunk and hundreds of thousands of lives lost. It had been completely different from what the Royal Navy had prepared for. This was not a result of the Admiralty's preoccupation with re-fighting the Battle of Jutland, as has been claimed, but actually the culmination of a number of factors, ranging from financial constraints to the downsizing of Britain's shipbuilding industries.

The Great War left Britain exhausted both financially and emotionally. The country was heavily in debt to the United States, and after the carnage of the war, did not want to spend a large portion of its Gross National Product on defense. The post war downswing in the economy, and the loss of its traditional markets, put a considerable strain on the country's finances, and this was reflected in the slashing of naval estimates. The His Majesty's Government abandoned the Two Power Standard that had been the cornerstone of naval policy for centuries and adopted the Ten-Year-Rule, foreseeing no major conflict for that period. This led to a fifteen-year period of

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[76]Kenneth Wynn, U-Boat Operations of the Second World War: Volume II (London: Chatham Publishing, 1998), p. 248.

disarmament treaties and the decrease in naval construction and modernization. Personnel were also affected with the officer corps being decimated by Geddes' Axe and pay rates being reduced. The hard financial times also caused considerable inter-service rivalry, the bitterest of all being in naval aviation, where a peculiar arraignment left the RN's carriers in the hands of the Admiralty, but the planes shared with the Air Ministry. By the time this situation was eventually abandoned, Britain's post war lead in naval aviation had disappeared.

Of course, battle readiness was also a problem during this period, as large scale fleet maneuvers and live fire exercises were seriously curtailed leaving the RN with a false sense of security where it came to air defenses and trade protection. Some beneficial experience was obtained through the constant stream of overseas commitments forced on the navy during the inter-war period, but this put a heavy strain on men and ships. Loath to upset the perceived balance of power, the Admiralty allowed many ships to do without necessary refit and modernization. Planning was also limited by financial constraints, where the Naval Staff was reduced to the bare bones and planning consisted more of ways to resist the next round of budget cuts rather than the latest advancements in convoy protection. It is in the area of trade protection that the Admiralty faces its severest criticism.

The Admiralty had always assumed that the threat to the sea lines of communication would come from surface vessels not from submarines. While short sighted, and a little naive, this was not a completely erroneous presupposition. The U-boats had been decisively defeated during World War I, and asdic had solved the problem of underwater detection, or so it was thought. In addition, who could have predicted the complete collapse of western Europe and Scandinavia to the Nazi juggernaut which provided Admiral Dönitz's U-boats with advance bases? Furthermore, while it was

a naive belief, the German navy was not even supposed to have had submarines up to 1935. Regardless, antisubmarine warfare was neglected between the wars, and even though most destroyers and smaller escort vessels were equipped with asdic, there had been few antisubmarine convoy exercises, certainly not involving a solely mercantile convoy against submarine attack, and few trained antisubmarine personnel. When World War II started on September 3, 1939, the RN was left scrambling for warships to escort the vital trans-Atlantic convoys. So while the Royal Navy had suffered considerable difficulties during the inter-war years, it was still able to present a creditable naval force to blockade Germany as it had done successfully during the Great War. However, it had not learned from its mistakes, and as a result was found wanting in the protection of the vital sea routes between the Old World and The New World.

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