H.M.S. DREADNOUGHT: MYTHS AND REALITIES

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Students of naval history often discover that the vessels "sufficiently memorable" -- to use a term from 1066 and All That -- to be included in a standard survey text are few in number.[1] The Maine, the Titanic, the Lusitania, the Panay, the Hood, the Bismarck, the Arizona and a few others do, to be sure, turn up in these texts from time to time. It often seems, however, that the only way for a ship to become "memorable" and make it into the history books is for the ship either to blow up or be sunk.

One rather obvious exception to that possible rule, of course, is the famous British battleship H.M.S. Dreadnought. It is one warship whose name and pictures still appear in our textbooks even though its obituary read "sold for scrap" rather than "sunk at sea."[2] If the Dreadnought's fame did not result from its fate, however, neither did it come from any spectacular accomplishment or action by the vessel during its thirteen years of service with the British Fleet. The only warship destroyed by this "powerful" British battleship during the First World War was the German submarine U-29 which the Dreadnought rammed and sank during March, 1915.[3]

The fact that a western civilization textbook published in 1983 would devote half a page to a British battleship launched in 1906 and which had neither a distinguished record nor a significant role in the First World War is, however, not surprising. The Dreadnought has always been portrayed as it was perceived to be rather than as it actually was. Public perception of the Dreadnought has thus become reality for our students. Although this perception was certainly important during the period before the First World War, it contained more myths than realities about the ship.

Textbook descriptions of the Dreadnought have, by now, become almost routine. The ship was the first "all-big-gun" battleship and so revolutionary in its design that it made all existing battleships completely obsolete. With its ten 12-inch guns it is said to have had twice the firing power of earlier battleships. It was faster than other battleships and more heavily armored. Other battleships were thus no match for the Dreadnought. According to the author of one English history text, indeed, the ship was so powerful that "it could sink the whole German navy."[4] The introduction of the Dreadnought in 1906, consequently, is said to have made all earlier battleships worthless and thus meant that all navies would start a new naval construction race on terms of equality.

The view that the Dreadnought was so revolutionary a warship that it made all others obsolete and started a new era in battleship construction is one which can be traced back to the British Admiralty itself in 1906. At that time Britain had more than enough battleships to maintain the so-called Two-Power Standard in battleships, i.e., more battleships than the next two largest navies combined, while the Entente Cordiale with France in 1904 and the destruction of the Russian Navy in the Russo-Japanese War had brought what the Director of Naval Intelligence in 1906, Captain C.L. Ottley, termed a "great change for the better" in the international

situation. The British Admiralty, consequently, had found it impossible to resist the demands of the new Liberal Government in Britain for reductions in naval construction.[5] Its battleship program for 1907-08, in fact, was reduced by half.

The British Sea Lords reacted to their defeat in the "battle of the budget" for 1907-08 by interjecting a new consideration into the manner in which the Two-Power Standard should be calculated. They now argued that the advent of the Dreadnought would henceforth have to be taken into account. In a memorandum during May, 1906, they contended:

> In 1907 and 1908 there will appear in the maritime arena for the first time a new type of vessel ('the Dreadnought') so formidable in offensive and defensive strength as to mark the beginning of a new naval epoch. For vis-a-vis to the 'Dreadnought' all existing battleships -- even the most modern -- will be practically obsolete.

The Sea Lords then introduced their "new" standard of naval strength.

> Hence it is scarcely an hyperbole to say that today all nations start de novo, and that if Britain is to preserve in the future her present Two Power Standard, she must do so by building sufficient 'Dreadnoughts' to maintain the Two-Power Standard in ships of this special type.[6]

The proposed modification of the Two-Power Standard had a double advantage for the Sea Lords. It justified an immediate reduction in Britain's battleship construction and, at the same time, an increase in a few years. As Britain had been the first to lay down the "new" type of ship, in other words, she would have a lead over other naval Powers and that would allow her to mark time for a year or two. The Sea Lords anticipated that Germany would have only two Dreadnoughts completed by 1910 while Britain would have a total of seven plus three Dreadnought battle cruisers in hand. Even the Franco-German combination would, according to the Admiralty's calculations, have only eight Dreadnoughts to match against Britain's ten.[7]

The Admiralty contended, however, that the advantage gained by being the first to build Dreadnoughts would be temporary at best. Other naval Powers would soon begin to build large numbers of the "new" type battleship and Britain would be hard pressed to maintain its superiority in Dreadnoughts. The Sea Lords thus expected that an increase in battleship construction would be necessary in 1909. In his memorandum of July 5th, Ottley warned:

> Up to the year 1909 our position will be satisfactory in regards to battleships, but from that time onwards, unless the building programme is well sustained, we shall be drifting year by year into a more and more precarious position; because our potential enemies will thenceforward be adding larger numbers of Dreadnoughts to

> their fleets than we shall; and one Dreadnought could account for an indefinite number of battleships of the present type, because no number of inferior armed and less speedy ships could cope with the new type -- the Dreadnought -- as she could calmly demolish them at a distance at which she herself could not be injured.[8]

Even before the first Dreadnought had been completed, gone to sea, tried out its guns, or tested its complicated machinery, consequently, the Sea Lords already claimed that it was so powerful a vessel that it could sink an indefinite number of existing battleships. They now wanted a Two-Power Standard in Dreadnoughts and that, of course, would make an increase in British battleship construction imperative within three years. Thus at the very time that the Sea Lords accepted a reduction in their shipbuilding program, they began to make a contention that would lead to the "Great Naval Scare" of 1909. In view of this, the Admiralty's claims about the Dreadnought deserve close attention.

During early 1906, the Admiralty prepared a memorandum in which it listed the "main distinctive features" of the new Dreadnought. These were: (1) the substitution of an armament of 12-inch guns for a mixed armament of 12-inch, 9.2-inch, and 6-inch; (2) an increase in speed to 21 knots; (3) an increase in displacement of 1,500 tons; and (4) an increase in cost due to the above.[9]

Whether these constituted abnormal advances in battleship design or were merely the normal evolutionary changes to be expected, of course, is a matter of interpretation. The Sea Lords argued both ways at different times and according to their needs of the moment. When the Admiralty was under attack for having introduced a battleship design which rendered Britain's enormous numerical superiority in earlier ships useless, the Sea Lords took the position that the Dreadnought was simply the next logical step in the evolution of battleship design. When the Sea Lords wished to defend their demands for additional construction, on the other hand, they argued that the Dreadnought was a most revolutionary battleship which made all others practically useless.[10]

During June, 1906, for example, the Sea Lords contended that the Dreadnought was most certainly not an abnormal advance in size, cost, or speed. In notes prepared for Edmund Robertson, the Parliamentary Secretary, they pointed out that battleships had been steadily increasing in cost and size for the past twenty years and that some of the previous increases had actually been larger than those which had been obtained in the Dreadnought. The latter had represented an increase in displacement of only 1,400 tons over its immediate predecessor class, the Lord Nelsons, while the additional cost had amounted to only £181,400. The King Edwards, by contrast, had involved an increase of 2,350 tons over their predecessors, the Duncans, and had cost an additional £380,245.[11]

The Dreadnought's speed of 21 knots was also described as being the next normal evolutionary step in battleship design. Although the Lord Nelsons had a designed speed of only 18 knots, there were other British battleships, i.e., the Triumph and Swiftsure, which had already achieved speeds in excess of

20 knots. Other navies were also now building battleships with speeds of over 20 knots. In their June, 1906,memorandum, the Sea Lords noted:

> The designed speed of the 'Dreadnought' is but little in excess of that of several battleships already afloat; the 'Katori' built in this country for the Japanese Government was credited at her recent trials with a speed over 20 knots, and it should be remembered that foreign Powers have not yet adopted the turbine engine, which type possesses special advantages at high speeds.[12]

The Dreadnought's larger tonnage, increased cost and greater speed, consequently, were little more than the usual developments which had been brought with the introduction of each new class of battleships. It had long been Admiralty policy to build battleships which were a little larger and faster than those of potential enemies and the new design was, at least in these respects, merely a continuation of existing policy. During 1906, in fact, the Sea Lords were uncertain that the Dreadnought would actually be superior to foreign battleships. The United States, they believed, was building a larger, more heavily armed and more costly battleship while Japan, France, and Germany were thought to be building, or about to build, battleships which would certainly be comparable to the newest addition to the British battle fleet.[13]

The Dreadnought's uniform armament of ten 12-inch guns was also more of an evolutionary than revolutionary change. The trend towards the all-big-gun battleships already existed and the Dreadnought was simply the next logical step. The Duncans, which had been launched in 1901, had carried four 12-inch and twelve 6-inch guns. The King Edwards, launched two years later, had four 12-inch, four 9.2-inch and ten 6-inch guns. In the next class, the two Lord Nelsons, the 6-inch guns were abandoned and the armament consisted of four 12-inch and ten 9.2-inch guns. The transition to the all-big-gun battleship had thus been made. The next step was simply to eliminate the difference between the two large caliber guns and that was done in the Dreadnought.[14]

In adopting a uniform primary armament, moreover, the Admiralty was simply keeping pace with what other navies had already decided to do. The United States, for example, had planned its first all-big-gun battleship some six months before the British began work on the plans for the Dreadnought and the two American ships, the South Carolina and the Michigan, had been approved by Congress in early 1905. The United States Navy, consequently, was actually the first to plan an all-big-gun battleship even though delays resulted in the two vessels not being laid down until November and December of 1906.[15]

There was, however, one innovation in the Dreadnought which was revolutionary. That was the substitution of the new Parsons steam turbine engines for the old reciprocating type. The latter was notorious for its unreliability. The new steam turbine engine did not suffer from the same defects and the improvement became apparent when the Dreadnought took its first cruise in late 1906. The ship steamed from England to

Trinidad and back at a speed of 17 1/2 knots and when the ship arrived home it had no defects in its main engines. A year earlier, by contrast, the ships of the Second Cruiser Squadron had attempted to cross the Atlantic from New York to Gibraltar at high speed. Three of the six ships had been forced to drop out of the race because of engine defects and the whole squadron was out of action for a month after the cruise for engine repairs.[16]

The full benefit from this application of the largest development in steam propulsion to battleship construction, nevertheless, could not be realized until a sufficient number of other battleships had been built with the same type of engine. The original Dreadnought itself, meanwhile, had so many errors in design and other shortcomings -- some of which, alas, were to be repeated in later ships -- that the greater reliability of her turbine steam engines would probably have been of little importance had the ship ever participated in a battle fleet action. In theory the new ship was, as Professor Marder has written, "the largest, fastest, most powerful battleship in the world." In reality, the ship was much less formidable than her paper strength indicated.

The primary advantage which the Dreadnought was supposed to have over all existing battleships, of course, was in the area of gunnery. The uniform armament of the new ship allowed her to fire eight 12-inch guns on each side. That was a considerable improvement over the four 12-inch and five 9.2-inch guns which the last class, the Lord Nelsons, could fire on a broadside. The weight of shell thrown in the Dreadnought's broadside was 6,800 pounds while that of the Lord Nelson was 5,300 pounds and the King Edward's was only 4,160 pounds. The larger number of 12-inch shells in the Dreadnought's broadside, moreover, could be expected to do more damage because of the greater explosive charge in each shell.

Even more important, however, was the fact that long distance firing then possible required the use of salvoes directed from an observation station placed atop the ship's mast. By observing where the ship's shells splashed down, the gunnery officers could determine the range of the enemy target. The procedure was first to straddle the target and then to hit it. The mixed armament of 12-inch and 9.2-inch guns greatly complicated the task because it was practically impossible to sort out the splashes made by the two caliber guns. The smaller the number of guns of the same caliber, moreover, the slower was the rate of fire and there were thus fewer opportunities to find the range.[17]

The Admiralty claimed, after target practice had been held in 1907, that the Dreadnought had solved the problem of long-range firing. Professor Marder took the same view when he wrote:

> The record of the Dreadnought in battle practice confirmed the value of an all-big-gun armanent. At a range of 8,000 yards in the 1907 battle practice, her first, the ship scored 25 hits in 40 rounds, which placed her third ship in the Fleet. But "the real test of firing capacity is weight of shell thrown in on the enemy," and here the Dreadnought showed 21,250 pounds of shell thrown on to the target in eight

minutes, which was 75 percent more weight of shell thrown on to the target than any other battleship.[18]

It is not really surprising, however, that the Dreadnought should have surpassed all other battleships in the target practice results of 1907. The new ship was already under attack by Admiral Fisher's opposition within the Royal Navy and the First Sea Lord had decreed that at all costs the Dreadnought should appear at the top of the list of results. If any other battleship did better in the competition -- and one, the Implacable, did do better - then it would simply and mysteriously have to lose some of its hits. The gunnery crews of the Implacable thus had to be content with a signal from the Commander-in-Chief of the Mediterranean Fleet, Admiral Sir Charles Drury, congratulating them on being first in the British Fleet.[19]

Admiral Fisher also took other actions to ensure that the new Dreadnought would do well in its first battle practice. He arranged for Lieutenant F.C. Dreyer, described by Admiral Bacon as "the most accomplished gunnery Lieutenant of that time," to be sent to the Dreadnought.[20] The gunlayers for the ship were also carefully selected so that the ship received the best trained and most experienced men available in the British Fleet. When the Admiral responsible for the training of gunlayers learned of Fisher's actions, his response was outrage and a threat to court martial all newly trained gunlayers who would have normally been assigned to the ship as being obviously unfit for duty.

The Sea Lords also changed the range for target practice in 1907 from 7,000 to 8,000 yards. Although the change was justified, it was a fact that the 12-inch gun was the most accurate weapon at 8,000 yards and above, while the 9.2-inch and 6-inch guns were the most accurate at ranges of 7,000 yards and below.[21] As the Dreadnought had twice the number of 12-iunch guns on its broadside as other battleships and as the range chosen was the most suitable for the 12-inch gun, the rules for the competition obviously favored the new Dreadnought and reduced the effectiveness of the armaments of the other battleships of the British Fleet.

If the battle practice of 1907 had been under the same conditions as in previous years, consequently, the results might well have been rather different. That, at least, was what the Secretary of the Committee on Imperial Defense argued in a rather lengthy memorandum. On the basis of the results obtained in 1905 and 1906, Sir George Clarke contended that the Dreadnought would have scored only about one-fourth as many hits as the Formidable, between one-fourth and one-fifth as many hits as a King Edward and between one-third and one-fourth as many hits as a Lord Nelson if the rules had not been changed. In terms of weight of shell thrown on the target, the Lord Nelson would have had twice the weight of the Dreadnought while the King Edward would have landed at least 50 percent more weight of shell than the Dreadnought.[22]

The number of hits scored and the weight of shell thrown on the enemy, in any case, were only part of the true test of fighting capacity. In order for the shells landed on an enemy battleship to be really effective they would have to penetrate the enemy's armor and then burst inside the vessel.

Unfortunately, the 12-inch shells supplied to the British Fleet could penetrate the necessary thickness of armor only at ranges of 7,000 yards or less. At the range contemplated for the Dreadnought's 12-inch guns, the shells simply broke up rather than "going on and bursting in the vitals of the enemy ships."[23]

The lack of an adequate armor-piercing shell, which reduced the effectiveness of the first Dreadnought and her successors as well, however, was considered by many gunnery officers to be of mere theoretical importance. There were so many other errors and shortcomings in the design and equipment of the new Dreadnoughts that they believed it highly unlikely that the ships would achieve the same degree of accuracy in actual battle which had been obtained in battle practice. The latter, of course, was usually carried out when conditions at sea and the weather were ideal for good shooting.

Perhaps the most remarkable of the errors was the placing of the first Dreadnought's tripod mast and its vital gunnery observation station directly behind the ship's forward funnel. It seems not to have occurred to those who designed the ship that the smoke from the funnel would obscure the view of the men atop the mast and prevent them from determining the range of an enemy target. The effect of the error was quite apparent to those who served in the ship. One officer who did so wrote in his memoirs:

> Shortly after I joined, we purposely carried out target practice in an unfavourable wind. The centralized control completely broke down and decentralized control was impracticable because the turrets were not supplied with range-finders and the officers could not identify the fall of their own shot. Thus our most powerful battleship might have been placed at the mercy of a ship half her size.[24]

According to Admiralty's own Inspector of Target Practice, Admiral Sir Percy Scott, the ability of the Dreadnought and its sister ships Colossus, Hercules, Conqueror, Monarch, Orion, Thunderer and Lion to land their shells on enemy battleships literally depended upon which way the wind was blowing and whether the enemy force was so positioned as to require the British ships to head into the wind, wrote Admiral Scott, the ships would have been "of no use for fighting purposes, unless they went stern first into action." Placing "the mast where the funnel ought to be and the funnel where the mast ought to be" -- to use Admiral Scott's words -- also had another disadvantage. The officers and men in the vital observation station atop the mast usually found their station almost unbearable because of the heat from the forward funnel. They had to do their work while being slowly roasted and at times could not come down from the station because the top of the mast got almost red-hot.[25] Admiral Scott's attempt to rectify the error, alas, met with little success.

> I took the liberty of pointing out this amazing blunder to the Admiralty and got myself much disliked for my pains. The Board of Admiralty were well aware of the blunder that

had been made, but they wanted it hushed up instead of being reminded of it.[26]

The fact that the Dreadnought and seven of its sister ships could be incapacitated by nothing more formidable than an unfavorable wind, of course, reveals another and even more significant deficiency in the design of the ships. As the individual turrets were not provided with range-finders and were thus unable to fire individually, they were absolutely dependent upon the one range-finder in the observation station atop the tripod-mast. If a single enemy shell should happen to strike the mast or the observation station itself, consequently, it would put all of the ship's 12-inch guns out of action. One lucky enemy shot, as one officer on the ship put it at the time, would "knock out the whole box of tricks."[27]

In addition to the fact that the Dreadnought was severely handicapped in range-finding when headed into a wind at high speeds, there were other deficiencies which affected the gunnery capability of the ship. The long-range firing for which the ship was designed necessitated firing by salvoes and that, in turn, required that all the big guns should be kept parallel and fired at exactly the same moment. The elevation of the large guns had to be constantly altered to compensate for the roll of the ship when in rough seas and, under those conditions, it was found practically impossible to keep the guns parallel. What was needed, observed Admiral Jellicoe, was a system of director firing whereby "one officer or man could lay and fire all the guns."[28]

Other deficiencies also made the adoption of director firing essential if the Dreadnoughts were going to be effective in all circumstances. Shortly after the Dreadnought came into service it was discovered that it could not carry out a chasing action because the high speed involved created a spray which washed over the gun sights and prevented the gunlayers in the turrets from seeing the targets. It was also found that the smoke from the foremost guns interfered with the firing of the other guns when the wind came from certain directions. To correct the defects, wrote Admiral Scott, the Sea Lords had essentially two courses open to them:

> (a) to adopt director firing, which eliminated both of the defects named;
>
> (b) to arrange that when practicing for battle no right ahead firing took place, and that the target should always be in such a position as regards the wind that the firing ship was not inconvenienced by smoke.

The Admiral then continued:

> The Admiralty adopted course (b), and as a consequence of this, for five years our officers and men were trained in a system of firing which could be effectively used only when the weather was fine and the enemy was met on a restricted bearing as regards the direction of the wind.[29]

What made all of the above most frustrating for Admiral

Scott was the fact that he had developed an effective system of director firing and had submitted it to the Admiralty, which had secretly obtained a patent for the system, consigned it to itself and then refused to adopt it.[30] The result was that the system was not given a fair trial until Winston Churchill became First Lord. The tests, held in the autumn of 1912, were relatively simple. The Thunderer was equipped with Scott's system and competed in gunnery practice with the Orion in rough seas. The former not only did much better than the latter, but it scored more hits than did most ships using the current system in calm waters. With the results of the trials before them, the Sea Lords at last decided to provide all new ships with the director firing system. Unfortunately, however, little progress followed the Admiralty's belated decision and only eight British battleships had been fitted with the essential system when was began in 1914.[31]

It is not surprising, consequently, that many officers who knew about the gunnery deficiencies in the Dreadnoughts were concerned about how the new ships would actually perform under battle conditions. They appeared to be "fair weather" fighting ships and the North Sea to which they were assigned when completed was not known for fair weather and smooth sailing. Even Admiral Fisher's friends afloat, in fact, had doubts about the advantages of the Dreadnought under the usual weather conditions in the North Sea. Some feared that foggy weather would allow an enemy battleship to get close enough to the Dreadnought to negate its advantages in long range firing.[32] A more common fear was that heavy fog would allow an enemy's torpedo craft to attack the Dreadnought and the latter really had very little protection against such an attack.

The deficiency in this area was also obvious to most of the Dreadnought's officers. Although the ship had been provided with twenty-seven 12-pounder guns for use against torpedo attack, ten of them were mounted atop the turrets for the 12-inch guns and it was most doubtful that they could even be manned if the big guns had to be in action against cruisers or battleships during the torpedo attack. Five of the remaining 12-pounders were located on the quarter deck where they were exposed to the blast of the ship's 12-inch guns. None of the 12 pounders had any protection against the effects of any enemy shells which might happen to strike the ship during the attack. Even more important, however, was the fact that the 12-pounders were simply incapable of dealing with the type of torpedo craft likely to attack the Dreadnought. The destroyers being built in 1906 were much better protected than had been the old torpedo-boats and thus a much larger and more powerful gun was required for defense against them. The Admiralty, in fact, soon acknowledged that fact and, in the next four ships, 4-inch guns were provided.[33]

In any case, it is quite apparent that the deficiencies in the area of gunnery made the Dreadnought vulnerable and reduced its offensive power significantly. The failure of the Admiralty to develop an effective armor-piercing shell and a reliable gunnery control system, moreover, was doubly regrettable because other things had been sacrificed in order to obtain the heavier armament and speed for the Dreadnought. The result was that while the advantages of the all-big-gun armament could only be realized under favorable weather conditions or when the target was relatively close, the

disadvantages of such things as insufficient armor remained.

The lack of adequate armor plating in the Dreadnought, indeed, evoked the greatest criticism from Admiral Fisher's opponents within the Royal Navy. Admiralty slogans such as "speed in armour" simply did not reassure those officers afloat who knew that, in certain circumstances, one enemy shell could blow up any of Britain's powerful Dreadnoughts. There were, to be sure, reasons why the Admiralty chose to place less armor on the Dreadnought than many considered essential. Additional armor meant larger tonnage if the 12-inch guns were to be kept. That, in turn, meant there would have to be very expensive alterations in docks and other facilities. A choice had to be made between guns and armor. "Everybody always wants everything," moaned Admiral Fisher, "and they can't have it."[34] There was also a political consideration. There was opposition in both the House of Commons and the Cabinet to the increase in the size of battleships and, according to Admiral Reginald Bacon, "20,000 tons or thereabouts was the maximum that it was practicable to put forward for approval."[35]

Although the charge made later that Admiral Fisher had failed to learn the basic lesson of all naval warfare, namely, "If you can't float, you can't fight," was certainly unjustified, the fact remains that the Dreadnoughts were seriously deficient in protective armor and this was the most dangerous weakness in them. As was the case with the deficiencies in gunnery, those in the area of armor were also quite apparent to the officers afloat even before three Dreadnoughts blew up at the Battle of Jutland. They also believed that the early Dreadnoughts had their protective armor in the wrong places. The 11-inch main armor belts on the sides of the Dreadnought, for example, were placed too low and were submerged below the waterline when the ship was fully loaded.[36] Even more dangerous was the failure to provide adequate deck armor for the ship. That was the fatal defect which made possible the destruction of the Dreadnoughts by a single enemy shell.[37]

In addition to the deficiencies in gunnery and armor, there were also several noteworthy mistakes in the Dreadnought which made the Admiralty's claims about the ship practically ludicrous. During her full-speed trials, for example, it was discovered that one of the three main shafts was developing twice the horse-power it was designed to stand and that the ship could not, therefore, maintain its twenty one knots of speed for any length of time. Next came the startling discovery that the steering engine was not powerful enough to bring the rudder central again if the ship were given more than ten degrees of helm while going over fifteen knots. The ship would thus run in a circle until her speed had fallen below fifteen knots.[38] It was also found that the ship would not steer at any speeds under ten knots and that if the helm were put over hard at the lower speeds the ship would go out of control and that "nothing would stop her turning like a saucer."[39]

Regardless of whether the errors in the Dreadnought were minor ones, e.g., the failure to provide a heating system for the Captain's quarters,[40] or major ones which exposed the ship's armament to being blinded and the ship itself to being blown up by a single enemy shell, there can be no doubt that the Dreadnought was, as Sir George Clarke noted in his diary

after a visit to the ship, "full of mistakes."[41] The Admiralty claimed, of course, that the Dreadnought was an experimental ship with so many innovations that some errors had to be expected. That was true but, unfortunately, it was also true that the most important errors in the Dreadnought were not corrected as they should have been.

The most vehement of the Admiralty's critics during the pre-war decade, of course, had a ready explanation for the errors in the Dreadnought. The ship was the First Sea Lord's blunder and he was responsible for its shortcomings. "Fisher has very little knowledge of either tactics or strategy and is constantly making mistakes," wrote Admiral Sir Reginald Custance before adding the hopeful note, "but as he has no solid convictions supported by well thought out arguments he is very ready to yield to criticism."[42] Others attributed the errors in the Dreadnought to what Sir George Clarke termed "inordinate hurry and want of study." The superintendent of Portsmouth Dockyard, where the Dreadnought was built, took that view. In August, 1906, Rear-Admiral Henry Barry wrote to his old friend, Admiral of the Fleet Sir Gerard Noel:

> She is a very powerful ship, two Dreadnoughts being about equal to three King Edwards, but personally I would back the King Edwards....Of course rushing a ship through like this mistakes are made which will be rectified in the next ship, but as for saying that she will make all previous battleships obsolete [that] is nonsense. That statement is only made for advertising purpose.[43]

The statement "made only for advertising purposes," however, may explain why the errors in the Dreadnought were not all corrected quickly. Once the Admiralty's battleship construction program came to depend upon the assertion that the new type of battleship was vastly superior to all existing battleships and made the latter obsolete, in other words, it was practically impossible for the Sea Lords to admit that the Dreadnought also had serious weaknesses. If the ship were less than revolutionary and not much better than the battleships already built, the Admiralty's case for continued battleship construction would be seriously weakened. When the Liberal Cabinet was no longer willing to build battleships for the sake of the old Two-Power Standard, the Dreadnought myth had to be kept alive at all costs.

While individuals such as Admirals Scott and Kerr attributed the Admiralty's inaction on such matters as the armor-piercing shell and director firing systems to sheer stupidity in Whitehall, the fact was that the Sea Lords simply had no interest in allowing any tests which might prove that the claims about the Dreadnought's comparative advantage over other battleships had been exaggerated. At best such tests would necessitate additional expenditures when there was already a shortage of funds. At worst, they would provide additional ammunition for the "syndicate of discontent," as Fisher termed his opposition with the Royal Navy, to use against the Admiralty and could undermine the latter's ability to obtain new battleships from a reluctant Cabinet and House of Commons.

Whatever may have been the reasons for the Admiralty's failure to do what was necesary to make the Dreadnoughts really effective ships, it is quite clear that the assertion that the new type of battleship made all existing battleships obsolete was simply nonsense. It was, as Professor Bernard Brodie pointed out many years ago, tantamount to saying that the older ships had "suffered a sudden extinction of firing power and mobility."[44] That the older battleships were not considered useless is, perhaps, best indicated by the fact that when war began in 1914 there were still ninety-four pre-Dreadnoughts in the navies of the various powers. Thirty-eight of them were in the Royal Navy.[45]

The fact that the Admiralty's claims about the great superiority of the Dreadnought were mostly exaggerations, however, was of little importance during the pre-war period. What mattered was whether the claims were believed to be valid by the Cabinet and the British public. Most of the members of the Liberal Cabinet had reservations about the Admiralty's assertions. The British public and press, on the other hand, were ignorant about the realities of the Dreadnought and accepted the myths as true. The same, alas, has also been true for historians to the present day.

NOTES

[1]W.C. Sellar and R.J. Yeatman, 1066 and All That (London: Methuen and Company, 1930), p.v.

[2]Donald Kagan, Steven Ozment and Frank M. Turner, The Western Heritage, 2nd ed. (New York: Macmillan, 1983), p. 886; and Walter L. Arnstein, Britain Yesterday and Today: 1830 to the Present, 4th ed. (Lexington: D.C. Heath, 1983), p. 230.

[3]Oscar Parkes, British Battleships (London: Seeley Service and Company, 1966), p. 483.

[4]Davis Harris Willson, A History of England, 2nd ed.(Hinsdale, Illinois: The Dryden Press, 1972), p. 703. Professor Willson also described the Dreadnought as having eight 12-inch guns instead of ten.

[5]C.L. Ottley, "The Naval Building Programme, 1907-08," 5 July 1906, Cabinet Papers, Cab. 37/84/80, p. 127, Public Record Office, London.

[6]Admiralty Memorandum, "The Balance of Naval Power, 1906," May, 1906, Thursfield Papers, THU/1, p. 6, National Maritime Museum, Greenwich, England.

[7]C.L. Ottley, "The Naval Building Programme, 1906-07," 5 July 1906, Cabinet Papers, Cab.37/84/80, p. 130. See Lord Fisher to Lord Tweedmouth, 26 September 1906, in Arthur J. Marder (ed). Fear God and Dread Nought: The Correspondence of Admiral of the Fleet, Lord Fisher of Kilverstone (London: Jonathan Cape, 1956), 2:91.

[8]C.L. Ottley, "The Naval Building Programme, 1906-07", p. 129.

[9]P.K. Kemp, ed., The Papers of Admiral Sir John Fisher (London: The Navy Records Society, 1960), 1: 305.

[10]For a discussion of the controversy over the Dreadnought, see Arthur J.

Marder, From the Dreadnought to Scapa Flow: The Royal Navy in the Fisher Era, 1904-1919 (New York: Oxford University Press, 1961-1966), 1:56-50; and Richard Hough, Dreadnought: A History of the Modern Battleship (London: Joseph Michael, 1965), pp. 33ff.

[11]Admiralty memorandum, "H.M.S. Dreadnought (Notes for use of the Parliamentary Secretary in Debate)" June, 1906, Tweedmouth Papers, 2:1-2, Naval Library, Ministry of Defence, London. See Also Kemp, The Fisher Papers, 1:34; and Parkes, British Battleships, pp. 415 and 425.

[12]Admiralty memorandum, "H.M.S. Dreadnought (Notes for use of the Parliamentary Secretary in Debate)" June, 1906, Tweedmouth Papers, 2:2.

[13]Admiralty memorandum, "H.H. Ships 'Dreadnought' and 'Invincible,'" October, 1906, Cabinet Papers, Cab. 37/84/80, p. 134.

[14]Admiral Sir William James, The Sky was Always Blue (London: Methuen and Company, Ltd., 1951), p. 56. See also Parkes, British Battleships, pp. 416, 426 and 451.

[15]Hough, Dreadnought, pp. 11-12; and Parkes, British Battleships pp. 467-68.

[16]Admiral Sir Reginald Bacon, The Life of Lord Fisher of Kilverstone (London: Hodder and Stoughton, 1929), 1: 264-65; and Parkes, British Battleships, p. 482.

[17]Admiral Sir Reginald Bacon, From 1900 Onward (London: Hutchinson and Company, Ltd., 1940), p. 98.

[18]Marder, From the Dreadnought to Scapa Flow, 1:66; See also R.H. Bacon, "Report of the Director of Naval Ordinance on Battle Practice," 19 December 1907, Balfour Papers, Add. MSS 49712, British Museum, London.

[19]Admiral Sir Mark Kerr, Land, Sea and Air: Reminiscences of Mark Kerr (London: Longmans, Green and Company, 1927), pp. 145-46.

[20]Bacon, The Life of Lord Fisher of Kilverstone, 1: 266-67.

[21]Ibid., p. 255.

[22]Sir George S. Clarke, "The Effectiveness of Naval Fire," 1907, C.I.D. Papers, Cab. 17/2, pp. 26-27.

[23]Admiral Reginald H. Bacon, The Life of John Rushworth: Earl Jellicoe (London: Cassell and Company, Ltd., 1936), pp. 162-63.

[24]Vice-Admiral K.G.B. DeWar, The Navy From Within (London: Victor Gollancz, 1939), p. 116.

[25]Admiral Sir Percy Scott, Fifty Years in the Royal Navy (London: John Murray, 1919), pp. 263-64.

[26]Peter Padfield, Aim Straight: A Biography of Admiral Sir Percy Scott (London: Hodder and Stoughton, 1966), p. 207.

[27]DeWar, The Navy from Within, p. 116. A secondary observation station was placed atop a "baby tripod" on the rear deck of the Dreadnought to remedy this defect. It was, however, too low to be used and was regarded as an unsightly erection more suitable for a searchlight platform. It was

converted to that purpose. No attempt was apparently made to correct the deficiency in the other ships. See Parks, British Battleships, p. 483.

[28]Admiral Viscount Jellicoe, The Grand Fleet, 1914-16 (London: Cassel and Company, 1919), p. 66.

[29]Scott, Fifty Years in the Royal Navy, pp. 260-61; and Padfield, Aim Straight, pp. 209-11.

[30]Parkes, British Battleships, p. 459.

[31]Jellicoe, The Grand Fleet, 1914-16, pp. 66-67; Scott, Fifty Years in the Royal Navy, pp. 252-55; and Vice-Admiral C.V. Osborne, Blast and Counterblast (London: John Murray, 1935), p. 18.

[32]Diary entry, 8 April 1909, in Arthur J. Marder (ed), Portrait of an Admiral: The Life and Papers of Sir Herbert Richmond (Cambridge: Harvard University Press, 1952), p. 47.

[33]DeWar, The Navy from Within, p. 117; Parkes, British Battleships, p. 479; and Marder, From the Dreadnought to Scapa Flow, 1:67.

[34]Kemp (ed), The Fisher Papers, 1:33.

[35]Admiral Reginald H. Bacon, "Some Facts about Fisher and His Warships," United States Naval Institute Proceedings. (March 1940), p. 397.

[36]Parkes, British Battleships, p. 480; See also Franklin G. Percival, "Fisher and His Warships," United States Naval Institute Proceedings, (August 1939), p. 1098.

[37]Admiral Mark Kerr, The Navy in My Time (London: Rich and Cowan, Ltd., 1933), p. 47.

[38]Bacon, The Life of Lord Fisher of Kilverstone, 1: 265-66. Admiral Bacon was the Dreadnought's first commander.

[39]Admiral Sir Sydney Freemantle, My Naval Career, 1880-1928 (London: Hutchinson and Company, 1946), p. 161.

[40]Freemantle, My Naval Career, p. 159.

[41]Diary entry, September 19, 1906, in Lord Sydenham of Combe, My Working Life (London: John Murray, 1927), p. 208.

[42]Admiral Sir Reginald Custance to Admiral Sir Gerard Noel, 21 September 1905, Noel Papers, NOE/4A, National Maritime Museum, Greenwich, England.

[43]Admiral Sir Henry D. Barry to Admiral Sir Gerard Noel, 28 August 1906, Noel Papers, NOE/5.

[44]Bernard Brodie, Sea Power in the Machine Age (Princeton: Princeton University Press, 1943), p. 446.

[45]Douglas G. Browne, The Floating Bulwark: The Story of the Fighting Ship, 1514-1945 (New York: St. Martin's Press, 1963), p. 225.