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Is command of the sea essential to attaining victory in wartime? Or is such command necessary to prevent defeat? Are these the same? Seapower to be properly used must be properly understood.

THE TRAFALGAR SYNDROME: JUTLAND AND THE INDECISIVENESS OF MODERN NAVAL WARFARE

by

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All the business of war, and indeed all the business of life, is to endeavour to find out what you don't know by what you do; that's what I called "guessing what was at the other side of the hill."

—Arthur Wellesley
Duke of Wellington

Introduction. It might appear presumptuous to quote a soldier at the outset of what is essentially a naval paper; however, if one recalls that "Generals-at-Sea" were the first admirals, one is reminded of the basic indivisibility of warfare in which light Wellington's remark remains most apposite. That Jellicoe's Jutland flagship was named the *Iron Duke* adds to the appeal of the quotation.

War is a guessing game. It has been described as "the play of chance and probability within which the creative spirit is free to roam"; closely resembling "a game of cards [it] is

more than a true chameleon that slightly adapts its characteristics to the given case."¹ To Sir Julian Corbett, war was not necessarily logical, but rather the "complex sum of naval, military, political, financial, and moral factors."² Given the nature of such a phenomenon, perfection in war becomes a utopian dream; chaos is its natural environment, and it is never the most perfect side that wins but rather the side that makes the fewest mistakes. Thus, as ignorant armies clash by night on land, navies must contend with the fog of war at sea.

There is an important difference, however, between war on land and war at sea. In the latter element, "ground" cannot be captured and held in strength by garrison. Command of the sea does not therefore involve actual conquest of the sea, but rather control of maritime communications. According to Corbett, such command does

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not mean that the enemy can do nothing, but that he cannot interfere with our maritime trade and oversea operations so seriously as to affect the operations of war, and that he cannot carry on his own trade and operations except at such risk and hazard as to remove them from the field of practical strategy.³

Command of the sea then, might never be absolute but often in dispute. This concept may not have been well-understood by either public or Admiralty in pre-Great War Britain.

It is in this context, however, that the issue of the decisiveness of modern naval warfare should be considered. Exactly how critical is command of the sea to ensuring victory in war? Obviously, it must depend to a great degree upon geography, "the bones of strategy." France, though more powerful at sea than Prussia, still suffered a humiliating defeat in 1870. Corbett concluded that Trafalgar, years before, was overshadowed by Austerlitz, that "without a supporting army, imaginatively led, the navy is not a decisively effective offensive weapon."⁴ This deduction is partially borne out by the assertion that every war in at least the last 150 years has been won or lost on land, military operations on land remaining the "touch-stone of military strength."⁵

For a nation that draws its economic strength from the sea, however, control of maritime communications is absolutely vital. There can be no doubt but that Britain would have been defeated in the Great War had her navy lost command of the sea. Yet, total annihilation of the High Seas Fleet probably would not have ensured an immediate Allied victory over the Central Powers. Germany conceivably could have prevailed on land much as it did in 1870. Ultimately, the key to success in this conflict seemed to relate more to protection of national economic bases than

to fiery engagements at sea. This was not necessarily recognized in British naval circles, however, and neither Mahan nor such other naval writers as Sir John Laughton assigned high priority to trade protection. Command of the sea came to be associated mainly with operations against the enemy fleet. The White Ensign all but eclipsed the "red duster."⁶

The question of how to attain and maintain an acceptable degree of command of the sea as defined by Corbett has always been open to debate. To Mahan the only way was to exert "overbearing power on the sea . . . exercised by great navies" with "the enemy's ships and fleets . . . the true objects to be assailed on all occasions."⁷ In arriving at his theory Mahan looked to soldier-theorists for models. In linking the political aim to naval warfare he imitated Clausewitz: in emphasizing principles such as concentration of force, the central position, and good lines of communications, he emulated Jomini. His American upbringing, however, probably caused him to reject a Jominian naval war of posts in favor of fleet versus fleet actions.⁸ This preference for the offensive against main enemy military forces, at a time when misinterpretations of Clausewitz were lending similar conclusions, had a profound effect on naval officers throughout the world. The "blue water" school of naval thought was born.

Linked with the growth of the "blue water" school, and perhaps even propelling it, was the naval revolution. As wooden ships faded from the scene, along with whatever Nelsonic doctrine there was, there developed not surprisingly an antagonism between the old and the new. Armies had already undergone a similar metamorphosis in regard to the place of the armored knight on the battlefield and were later destined to experience further pangs over the future of cavalry. In the case of the Royal Navy it was the schism between

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the "old sail hands" and the armored-steamer revolutionaries. With the 1872 launching of H.M.S. *Devastation*, a mastless, iron-hulled, armor-plated and screw-driven warship, it was obvious which school had prevailed. Naturally enough, progressive sailors tended to be believers in materiel; after all, that was what the struggle had been about.⁹

At the same time, the British public at large was concerned that "steam had bridged the channel" and that the coasts of the United Kingdom were open to sudden, unpreventable invasion by Continental military forces.¹⁰ This attitude, coupled with a growing public awareness of things military, was to place a greater strain on British military establishments than ever before. It was an age of mass armies made possible by rapid industrialization, social Darwinism, and reckless jingoism. Technological accomplishment was often viewed as an end in itself, as any glance at the Eiffel Tower will attest. To possess great ships was for many nations a mark of prestige. Ships were also looked upon to varying degrees as deterrents, particularly in the case of Germany with its "Risk Fleet," ironically so provocative to Britain. When war broke out, however, all bluffs were called and the pace of new weapons developments ultimately called for new deployments.

In the case of the Royal Navy it is probably fair to say that it was, on the eve of the First Great War, in the forefront of modern development and responsive to industrial progress. This was in stark contrast to the land forces of the period which were basically still in the horse and carriage era.¹¹ Whereas the armies were doomed to flounder in the mud and wire of Flanders, awaiting technological resolution of the dominance of the "queens of battle" (machineguns), the Royal Navy, however unwillingly, was better able to adapt to the new demands made upon it. Although it was slow in instituting the convoy system, there were some

naval officers like Admiral Beatty who firmly believed in such measures. On the more positive side of military progress, however, the navy must of course take credit for pioneering the tank, the technological solution to trench warfare which the army was slow to grasp.

Aim. This article will examine the record of the Royal Navy in the Great War with a view to determining the extent to which the navy suffered from the "Trafalgar Syndrome": a generally unhealthy preoccupation with grand fleet actions to the exclusion of other naval considerations. In the course of doing so, the question of the decisiveness of the Battle of Jutland also will be addressed. Was it really a valid aim to seek decisive battle with the High Seas Fleet on the North Sea? According to Ken Booth, "fierce engagements at sea are only the last act in a drama which begins with restrained confrontations in far-off corridors of power."¹² Yet, what does one do when faced with a strong enemy fleet of recognized technical and fighting quality when one's bluff is called? At this point "guessing what's on the other side of the hill" becomes a very important consideration indeed.

In a related vein, some space also will be devoted to the human side of the question. Royal Navy officers of the time were supposedly very narrowly involved with their profession, their most common wardroom reading material being "the *Sporting Times* and one or two illustrated magazines."¹³ However, if they tended to be preoccupied with seeking battle at sea, the system at least compensated for such "fighting blockheads" by throwing up at the time a commander of caution and prudence. To their credit, they were competent leaders and supremely confident. The Royal Navy was as a result convinced that it could lock the Germans in the North Sea, defeat them there in battle, and strangle the German nation through blockade. Although

technologically surprised by the power of the submarine, it almost accomplished all three objectives. It definitely accomplished the most important.

This is not intended to be an apologia for the shortcomings of the Royal Navy, of which there were many. However, it will tend to show that this particular service, on balance, performed its wartime role in a reasonably creditable manner. It will also attempt to demonstrate that it was less affected by the "Trafalgar Syndrome" than its Second World War progeny. In the Great War industrial technology made its debut but its capabilities were largely unknown; this was not the case in the Second War, when it was much easier to guess what was on the other side of the hill.

Sea Room. The decision by the British Government to send its "contemptible little army" to fight on the continent made the defense of France the cornerstone of British policy. This involved a radical change in traditional naval strategy: the greatest fleet in the world had been given a secondary role. The "continental" and "blue water" schools of British strategy had of course existed since Elizabethan times, but adoption of the former prior to the First Great War was not necessarily based on brilliant appreciation. At the meeting of the Committee of Imperial Defence 23 August 1911 the War Office presented a concrete plan for commitment of the British Expeditionary Force to France. The decision ultimately taken was to "commit . . . [British troops] at what then appeared to be the decisive point." It was prompted by the War Minister, Lord Haldane, who threatened to resign if the Admiralty did not "work in full harmony with the War Office plans."¹⁴ The Royal Navy, unfortunately, offered no concrete plan and when war broke out fancy staff work prevailed over reason: the BEF was dispatched to France in accordance with the Army plan.

With the adoption of the distant blockade from Scapa Flow and Rosyth, the Royal Navy departed from earlier Nelsonian strategy. The old close blockade that normally kept hostile fleets within a few hundred miles of each other and usually precipitated quick actions was no longer considered prudent in view of the offensive power of submarines, mines and torpedoes. At the same time, however, the British population was prone to invasion scare, the primary reason for retention in Britain of large land forces.¹⁵ Weaned as they were on a perceived Nelsonian tradition of offense, the British public was not totally content with the seemingly defensive posture of the Royal Navy.

The attitude of the British public towards their navy in the First Great War was not substantially different from that of its ancestors in the age of sail. The latter were constantly "asking fretfully" what the fleet was doing and why it wasn't attacking the French or Spanish Fleets. When no word of battle was heard they would grumble and charge that the admirals were lacking in initiative and playing for safety. Even Nelson on one occasion came in for this form of criticism. The general public never seemed to realize that the object in maritime warfare is the severance of the enemy's sea communications and the preserving of one's own communications, and that the vessels that attack and defend trade routes operate under the protection of the main fleets. Britain's naval commanders of the past, however, had the advantage of living in a predemocratic age in which public opinion could in large part be ignored.¹⁶

It was in this climate that the fleet made its bold penetration of the Helgoland Bight on 28 August 1914. The action confirmed the High Seas Fleet in its exaggerated respect for the Royal Navy and made the Kaiser more determined than ever to restrict it to a

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defensive strategy. This pleased the diplomats who thought the navy would be a good bargaining chip in future peace talks, and the German Army which, while confident it could win the war by itself, looked on the fleet as good flank protection. Not surprisingly, the British did not perceive German aims in this manner. They fully expected an attempt by the German Fleet to break out to either attack trade or invade/raid the east coast of England. Before 19 August, by which time the BEF was safe in France, it was feared that the High Seas Fleet would interdict its cross-channel crossing.¹⁷

Regardless of their war aims, and the fact that as a deterrent the High Seas Fleet had failed miserably, the Germans possessed the initiative from the outbreak of hostilities. The "fleet in being" concept did adversely affect the disposition of the Royal Navy in other parts of the world, as was clearly demonstrated in the contest with the German China Squadron commanded by Vice Admiral Count von Spee.

On learning that von Spee was making for South America, Rear Adm. Sir Christopher Cradock, commander of the 4th Cruiser Squadron in the South Atlantic, requested modern ship reinforcement so that he could adequately deal with von Spee's powerful crack armored cruisers, *Scharnhorst* and *Gneisenau*. The Admiralty response, with Vice Admiral Sturdee (Chief of the War Staff) primarily responsible, was to dispatch the old, slow predreadnought battleship *Canopus* to Cradock. In response to Cradock's suggestion to form two squadrons each strong enough to defeat von Spee, one for each coast of South America, the Admiralty through poor staff work divided the available force into two squadrons (the one under Cradock), each inferior to von Spee. By attempting to guard everything, trade routes in particular, the Royal Navy was in fact weak everywhere in the region. Concentration of

force, Sir John Laughton's oft-touted naval maxim, was achieved neither in space nor time.¹⁸

In such circumstances Admiral Cradock, only too aware of Admiral Troubridge's failure to engage *Goeben* in the Mediterranean in August,¹⁹ sailed his inferior squadron round Cape Horn to the west coast of South America to look for von Spee. He knew that any damage he might inflict on the German ships would be irreparable as they possessed no dockyards or bases. When Admiral Cradock met the superior German squadron off Coronel on 1 November 1914 he did not flinch; trying to use the sun to his advantage he attacked von Spee from the west. With only an hour of daylight remaining, however, this tactic proved double-edged; the British ships were soon silhouetted against the horizon and the German vessels smudged shapes in the gathering darkness. The rest was mathematics, with the twelve 8.2-inch guns of the German squadron replying to but two British 9.2-inchers on Cradock's flagship. Within an hour two "second-rate" British cruisers had been sunk and 1,600 British sailors killed. It was the first defeat for the Royal Navy in over a century. The Kaiser on learning of the action ordered that 300 Iron Crosses be presented to the China Squadron. They were never to be awarded, however, as Coronel was a Pyrrhic victory. Von Spee had expended 42 percent of his 8.2-inch ammunition and he knew he was doomed. When offered a bouquet of roses in Valparaiso, he asked that they be saved for his funeral.²⁰

British retribution was quick in coming, most of it generated by the indefatigable Lord "Jacky" Fisher. His strategic genius led him to detach three capital ships from the Grand Fleet, dispatching two of them directly to the Falkland Islands. One of the latter sailed with skilled dockyard workers as Fisher overrode repair scheduling; the wisdom of this decision was subsequently shown

as the two fast battle cruisers arrived at the Falkland Islands just before von Spee. Fisher also directed the grounding of the old battleship *Canopus* in the inner harbor of Port Stanley so that its 12-inch guns could be used in the role of a fort. In a stroke of poetic justice Sturdee was dispatched to avenge Cradock, with instructions to annihilate, not just beat, von Spee.²¹

On 8 December 1914 von Spee arrived off Port Stanley, catching Sturdee's force in harbor. Fortunately, however, protective fire from *Canopus* enabled Sturdee's ships to leave their anchorages and get up steam. On seeing the tripod masts of the two British battle cruisers *Invincible* and *Inflexible*, von Spee's squadron fled; he was now hopelessly outgunned by the 12-inch guns of these capital ships. By the end of the day, all German warships except *Dresden* had been sunk and over 2,200 German seamen lost. Fisher, having done everything possible to ensure success for Sturdee except command himself, was incensed over the escape of *Dresden* and charged the former with "criminal ineptitude." It was not long, however, before *Dresden* (and all other surface raiders for that matter) were cleared from the seas.²²

The Falkland Islands was the last gunfire-only naval engagement, and it was the only substantial British naval victory of the Great War. Materiel superiority certainly contributed to the British victory, but strategic good sense was also required. This was provided by Fisher who knew how important it was to "lock up the world." In Dr. Schurman's opinion, the Falkland facilities themselves played a great part in bringing about this particular action, which was "really the decisive naval battle of [the war]."²³ After the Falklands victory Britain exercised almost total control over the world's oceans. The Royal Navy thus had all the sea room it needed, and its willing foe was cornered in the German Sea.

A Willing Foe. The Dogger Bank action of 24 January 1915 between the battle cruiser squadrons of Admirals Beatty and Hipper cost the Germans one armored cruiser and a High Seas Fleet commander, Admiral Ingenohl, who was replaced. The new commander, Admiral Pohl was urged by the Kaiser to be even more cautious than his predecessor. This meant there were now two very cautious fleets in the North Sea as the German submarine menace was weighing particularly heavy on the minds of both Beatty and the Grand Fleet commander, Admiral Jellicoe. The sinking of the three elderly British cruisers, *Abouker*, *Hogue*, and *Cressy*, on 5 September 1914 no doubt affected Beatty's tactics at Dogger Bank as he thought at one point he was being led into a submarine trap.²⁴

Had the High Seas Fleet chosen to engage the Grand Fleet in the fall of 1914 they could have done so at reasonable risk. As Churchill stated, the destruction of the German China Squadron necessitated the deployment of nearly 30 British warships.²⁵ Shortly before Christmas 1914 the Grand Fleet was at its nadir and Jellicoe could have mustered but 18 dreadnoughts, 8 pre-dreadnoughts, and 5 battle cruisers against the German's 17, 12, and 5 respectively. The Kaiser's policy of caution prevailed, however, and was shortly to be reinforced.²⁶

Although the Dogger Bank action gave the Germans a bloody nose and made them "profoundly depressed," they learned some very good lessons from it. The first line ammunition allocation to ships was increased and flameproof scuttles were introduced to reduce potentially lethal cordite flash between handling rooms and magazines. Turret armor and ship sideplating was also strengthened in German ships. The British, on the other hand, learned no lessons as they had won. They did, however, manage to keep secret the fact that they had broken the German

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Navy's wireless grid code; this substantial intelligence advantage was never lost. A year was to elapse before the fleets engaged again.²⁷ Navies as well as armies were now stalemated.

In 1915 the Allies attempted a strategy of evasion and commenced abortive diversionary operations at Gallipoli and Salonika. In February 1916 the new Chief of the German General Staff, General von Falkenhayn, launched an offensive at Verdun with the object of bleeding France, "the sword of England," white and forcing Britain to weaken "the enormous hold [she] . . . still had on her allies." He urged the Imperial Navy to mount an offensive that would assist in this regard. The new aggressive commander of the High Seas Fleet, Admiral Scheer, was therefore given permission to undertake operations designed to trap and overwhelm weaker elements of the Grand Fleet. In April he shelled the English coast with an "impunity" that shocked the British public. A nation bred to believe itself invincible at sea thus looked even more to Jellicoe to repeat the glories of the past and sweep the enemy fleet from the sea.²⁸

What the public did not completely consider, however, was that Rodney, Howe, Jervis, and Nelson had worked with known technological quantities. Jellicoe, on the other hand, had to deal with mines, torpedoes, wireless, submarines, long-range guns, and even aircraft—all imponderables on which the recent Battle of Tsushima could shed little light. Moreover, admirals in the days of sail rarely hazarded more than a third of Britain's Fleet in their decisive encounters.²⁹ Finally, Jellicoe also had to work with more materiel. By way of comparison: in 1805 Nelson, with 27 ships of 2,250 tons, annihilated 33 from France and Spain; in 1905 Togo, with four battleships as large as 16,000 tons and eight armored cruisers destroyed a like number of Russian ships; at Jutland no fewer than 64 capital ships, one as

large as 28,500 tons, met in combat. In all, 254 ships displacing 1,600,000 tons were involved. It was the culminating action of the "Age of Steam" as Trafalgar was for the "Age of Sail."³⁰

Although Jellicoe's Fleet was of a later age, his objective remained Nelsonic. Unlike Scheer, Jellicoe aimed at bringing on a decisive naval engagement. He believed that with his numerical superiority and superior gunpower he could annihilate the High Seas Fleet in a daylight duel. However, he was also intelligent enough to realize that he "could lose the war in an afternoon." Only in a decisive engagement was there a real risk of the Grand Fleet losing the war; as long as it remained at Scapa Flow it had all the "latent potential of the queen on the chess board."³¹ Jellicoe was therefore determined to fight under conditions of his own choosing, and to avoid at all costs becoming the first British admiral in history to lose a Trafalgar.

On 30 May 1916 the Grand Fleet learned from Naval Intelligence that the High Seas Fleet intended to raid shipping off southern Norway the next day. The 31st of May found the Grand Fleet at sea with Beatty's scouting force sweeping eastward towards Jutland. At 1428 the two fleets made contact and the Battle of Jutland was precipitated. Twenty-eight British dreadnoughts and nine battle cruisers were ranged against sixteen German dreadnoughts and five battle cruisers; 344 British 12- and 15-inch guns opposed 244 German 11- and 12-inch guns.³² The scene was set for the naval Armageddon expected by Lord Fisher. But neither commander knew the other was at sea.

The German battle cruiser scouting force under Hipper opened fire on Beatty's squadron at about 16,000 yards. A run to the south followed in which two British battle cruisers, *Indefatigable* and *Queen Mary*, were sunk mainly because of cordite flash produced by effective enemy shelling.

Hipper's squadron only escaped serious loss because of the inferior bursting quality of British projectiles.³³ Beatty in the meantime sighted the main body of the High Seas Fleet to the southeast. He therefore turned north intending to lead it into the path of the Grand Fleet under Jellicoe.

From 1650 to 1800 the main German Fleet of sixteen dreadnoughts and seven predreadnoughts cruising in a single column pursued Beatty to Jellicoe's concentration. As soon as contact was made and details of the German deployment determined, Jellicoe, with masterly skill and a sure "eye for battle" deployed his 24 dreadnoughts in column, capping Scheer's "T." The Grand Fleet could hardly have been placed more advantageously had Jellicoe controlled the movements of both fleets. Fortunately for the surprised Scheer, he had practiced an evasion tactic that he now adopted in desperation and with good effect. However, in escaping Jellicoe momentarily Scheer seems to have become confused to the point of rashness and he unwittingly steered into Jellicoe's line again. Jellicoe responded quickly, crossing his opponent's "T" once more and subjecting the High Seas Fleet to "the most devastating fire yet experienced in the action." Scheer again executed a successful turn away with his destroyers covering the move. Their subsequent torpedo attack on the British Fleet caused Jellicoe to react in the orthodox manner by ordering his own ships to turn away. They easily avoided the torpedoes. Had Jellicoe ordered his ships to turn towards the torpedoes he would have had the "overwhelming advantage of closing the enemy."³⁴ He chose instead the course of minimum risk.

This was the last encounter between the two fleets before night closed. Despite losses, the majority caused by Hipper's battle cruisers on first contact, the Grand Fleet remained in command of the situation. It now stretched in a

line more than 10 miles long between the German Fleet and its home base.³⁵ Scheer had been taken twice by surprise, extricating himself brilliantly both times. At this point, however, his only major concern remained how to get out of sight and away as soon as possible. In the dark of night he made his final desperate move, at cost of one predreadnought battleship and two light cruisers. By 0330 on the "Glorious First of June" he had clear path to Germany, but the Grand Fleet had undisputed control of the world's seas. In the end, the High Seas Fleet preferred mutiny to another encounter with the Royal Navy.³⁶

The Battle of Jutland revealed many inadequacies within the British Fleet. Standing operating procedures tended to be either inflexible or inadequate. British gunnery was inferior to the German, and British offensive spirit was to great degree subordinated by defensive precautions against mines, torpedoes, and submarines. British projectiles were inferior to those of the Germans and the Royal Navy had failed to ensure against cordite flash. Nonetheless, notwithstanding the superior construction of German ships (as were French ships in Nelson's time), British battleships gave an excellent account of themselves at Jutland. At the same time, given the primitive state of wireless telegraphy and difficulty in related problems of control, it is understandable why Jellicoe attempted to retain centralized control and why he rejected night action as impracticable.³⁷

The more one reads of the Battle of Jutland, however, the more convinced one becomes that Scheer narrowly avoided a crushing defeat on the North Sea. Had there been less mist and more hours of daylight, even the 16-point defensive turns that he had practiced in detail may not have helped him. Had Jellicoe attained his aim there can be "no question about the tremendous benefits that would have followed the

destruction of the High Seas Fleet." It would certainly have been a great blow to German morale and it might have permitted Royal Navy penetration of the Baltic. More soldiers would have been released from guard duties in England for service in France, and additional ships would have been released for attacking submarine pens and convoy duty.^{3,8} As it was, however, the High Seas Fleet remained a "fleet in being," providing flank protection for the German Army and home base coverage for the German submarine fleet.

Ultimately, the Battle of Jutland must be judged as final but indecisive. In the circumstances, to seek destruction of the High Seas Fleet was a valid aim, and Jellicoe almost succeeded in doing just this. Given the right combination of recklessness, time, and weather conditions it could have been another Trafalgar. The stars in their course fought as much against Jellicoe as did Scheer.

In the matter of recklessness, however, it is worth noting the postbattle Admiralty communique that pointed out that whereas the Grand Fleet was vital to the Allied cause, the loss of the High Seas Fleet would not have led to the immediate collapse of the Central Powers. The former fleet therefore logically could not be risked to the same degree as the latter. Admiral Jellicoe, consequently, had to temper his eagerness for decisive battle with caution against losing many ships by torpedo, submarine, or false move on his part under the guns of the High Seas Fleet. Under such pressure he did as well as could be expected, and the "Young Turks," including Richmond, who later criticized him for being too passive should have realized this. The most decisive naval battle of the war was the Falkland Islands as it gave Britain command of the sea communications that she required whilst denying them to Germany. Jutland in no way affected this strategic picture, as Britain retained

her command of these communications by virtue of not being defeated. Such was the primary object of the clash on the North Sea; the destruction of the German Fleet, though desirable, was but secondary, and this Jellicoe appeared to understand, perhaps better than anyone else.^{3,9}

A Bloody War. The Battle of Jutland and the failure of Scheer's subsequent sorties against the Royal Navy persuaded the Germans to look once more at submarine warfare as a way of bringing Britain to her knees. The German nation was beginning to feel the inexorable crush of the blockade and the German General Staff realized that Germany was losing the war simply because she was not winning. Desperate measures were needed, and mustard gas was introduced in addition to unrestricted submarine warfare. The German Chancellor commented at the time that "The U-boat war is the last card."^{4,0}

The first U-boat campaign which resulted in the sinking of *Lusitania* ended in September 1915 in response to American diplomatic pressure. Originally initiated as a counterblockade in response to Britain's tightening of its surface blockade, it was not regarded as exceptionally effective. Although Britain lost 900,000 tons of shipping during this period, she constructed 2 million replacement tons. The Admiralty's confidence in its judgment was high at this point as the success of the navy in dealing with surface raiders confirmed its prewar conclusion that such losses, though inevitable, could be kept within reasonable limits. This same logic seems to have been applied in the case of the submarine. Largely ignored was Lord Fisher's earlier prophecy that "the submarine menace is a truly terrible one for British commerce." Eight days after the sinking of *Lusitania*, the British, freed from American opposition to search at sea, established a full blockade.^{4,1}

In February 1917 Germany commenced unrestricted submarine warfare against the commerce of Great Britain with twice the number of U-boats she had in 1915. Britain reeled under the onslaught, as she had already been experiencing by late 1916 the loss of over 150 ships per month. Jellicoe, First Sea Lord since December 1916, realized that he faced a revolution in naval warfare and he was stymied. Like Kitchener, who commented on the stalemate of the trenches—"I don't know what is to be done—this isn't war!" Jellicoe's reply to Rear Admiral Sims question, "Is there no solution?" was an equally pessimistic, "Absolutely none that we can see." And the First Sea Lord was not the only man who thought Britain close to defeat.^{4 2}

The Royal Navy had obviously been prepared for a surface *guerre de course* and had over the years developed a reasonably effective method for dealing with such a threat. Lord Fisher assumed that if attacks on trade were to be undertaken, they would probably be executed by strong cruiser squadrons like von Spee's. To cope with this threat the Admiralty under his direction maintained a sufficiency of powerful armored cruisers that could be used for scouting, reconnaissance, and cruiser work in general. Small ships, he insisted, would be useless for commerce protection. Thus, when war did come, cruiser squadrons were deployed round the world, patrolling specific trade routes searching for raiders. Before the U-boat emerged as the principal commerce destroyer, the "patrol" system of trade protection was reasonably successful.^{4 3}

The trouble with the Great War naval patrol system was that it was not specifically oriented towards trade protection in detail. The cruiser squadrons rarely possessed detailed knowledge of the movement of merchantmen within their respective areas, their great concern being "sea area" security rather than individual ship protection.^{4 4} The

surface raider with its dependence on base support and with no hope of returning home to Germany was overcome by this system, but the hard-to-detect submarine was another matter.

The patrol system employed by the Royal Navy had its roots in history. In 18th-century mercantile Britain great emphasis was given to protection of commerce and when "priority choice" had to be made by admirals between military objects and the protection of national merchant shipping, the latter course was usually adopted. The principal measure of trade defense at that time was of course convoy, but it was augmented by a system of reinforcement patrol in more dangerous waters.^{4 5} In the headlong rush of the Royal Navy towards technological supremacy, emphasis on trade protection declined, no doubt a natural result of growing specialization. Writers like Laughton, Corbett and Richmond to be sure, did not regard trade warfare as particularly decisive. Ironically enough, it was increased technological development that forced the navy once again to adopt the ancient convoy system.

Although the navy was slow to adopt the convoy system, this is not to say that it wasn't studied at all before the war. Writing in 1906 Fred T. Jane stated that convoys "in the old days were rarely very successful: the principal problem being the difficulty of keeping merchantmen together. That difficulty would probably be still greater today . . ." As an alternative to convoy he proposed "national insurance . . . probably a better system." Commerce, in his opinion, was better left to look after itself.^{4 6} This attitude seems to have been adopted by the Admiralty, for time and again it made reference to the inability of merchantmen to keep station in a convoy.

It is also worth noting that prewar opinion in general did not look upon submarines as a serious menace to either warships or merchantmen. Speed and

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zigzagging were regarded as the practical antidotes. During the war little progress was made in antisubmarine warfare (ASW) for a long time. The first ASW patrol of the war was armed with a blacksmith's hammer and a canvas bag: the hammer to smash the periscope and the bag to be tied over it.⁴⁷ "Q" ships, fighting vessels disguised as merchantmen, after a few initial successes proved to be almost useless. Arming of merchantmen proved to be a more effective method but not the final answer.⁴⁸ The hydrophone, invented in 1915 had very limited use until late 1917. The depth charge, developed in 1915, did not have production details ironed out until 1917.⁴⁹ The lack of technological means to deal with the submarine meant that the "offensive" patrols preferred by the Admiralty had to eventually give way to "defensive" convoys.

The main objections of the Admiralty to convoys was that they would merely serve to bunch targets at pace of the slowest ship, delay sailings, jam port unloading facilities, add to the dangers of collision, and take escorts away from offensive taskings. Jellicoe perhaps manifested the frustration of some Admiralty circles when he remarked that "We are carrying on this war . . . as if we had absolute command of the sea. We have not—and have not had for many months . . ." His recommendations, essentially negative, were to cease such "sideshow" operations as Mesopotamia, East Africa, and Salonika which absorbed so much shipping, and only bring reinforcements across the Atlantic in food-carrying ships. However, neither this nor the system of patrolled routes upon which he had pinned so much hope, would have gotten to the root cause of the problem.

According to Dr. Schurman the convoy system might have been introduced before spring 1917 had the Royal Navy not been so wedded to the concept that its whole aim was to fight a large-scale fleet action in the North Sea.⁵⁰ To be

sure, such thinking may have accounted for the Admiralty preference for offensive measures of patrolling and mining, rather than defensive ones as the convoy system, in combating the submarine threat. Certainly it would have been ideal to destroy submarines in their pens or to hunt them down at sea, but the technological means to do so were just not available at the time. However, there were some senior officers like Admiral Beatty, then C-in-C Grand Fleet, who were firm believers in the convoy system. There is also reason to believe that sufficient escorts would have been available for convoy duty without denuding the Grand Fleet of its destroyers. In the view of Vice Admiral Dewar, the system of patrolled routes absorbed an enormous number of smaller ships without being effective against U-boats. He contended that had the Admiralty really been in favor of the convoy system from the beginning, there would have been no difficulty in providing escorts.⁵¹

Our Ships . . . Our Men. With the defeat of the U-boat by convoy, Germany had no other weapon with which to dispute the command of the sea. The real crux, as Beatty had so simply pointed out, was whether Britain could "blockade the enemy to his knees, or whether he does the same to us."⁵² The results of course speak for themselves: during the last 2 years of blockade 800,000 noncombatants died in Germany from starvation or disease directly attributable to undernourishment. At no time during the war, on the other hand, was there any widespread privation in Britain, though there were shortages in 1917-18. In General Fuller's opinion, of the two most important factors accountable for the collapse of the Central Powers, the blockade was the one that struck at the "vitals." Judged by such ultimate and decisive results, the Royal Navy had performed its job superbly.⁵³

If the Royal Navy had blotted its copybook in its response to the submarine threat, it can be argued that it did at least adapt organizationally to defeat a revolutionary technological development. This surely must stand in stark contrast to the army experience in which the generals failed utterly to adapt to the new technology of rapid-fire weapons, choosing instead to send another million soldiers up the line when the first million had been used up. These were the real "fighting block-heads" of the war, and it is to the Admiralty's credit that it pioneered the technological solution to the army's technological stalemate.

In seizing almost immediate command of the world's oceans, the Royal Navy asserted its strength with some good strategical sense. Perhaps it could have been done better and the disaster of Coronel averted, but after a century without serious challenge who could really expect more? Under the circumstances the Battle of Coronel assumes the proportion of being but the opening round of the nearest to decisive naval battle of the Great War, the Battle of the Falkland Islands. From that point forward:

The Hohenzollern dreadnoughts could not place themselves upon a single trade route, could not touch the outer hem of a single oversea Dominion, could not interfere with the imports on which the British Isles depended, could not stem the swelling stream of warriors who came from every land and clime to save the cause of civilization. So long as Admiral Jellicoe and the Dover Patrol held firm, the German Fleet in all its tremendous strength was literally locked out of the world.⁵⁴

Jellicoe's attempt to destroy the High Seas Fleet at Jutland was a reasonable objective as it would have given further advantage, if not decision, to the Allied cause. The psychological benefit

and propaganda value of such a victory would have been incalculable; and the Kaiser perhaps knew this better than anyone. Had Jellicoe not chosen to turn away from the torpedoes launched by the Germans, he may well have realized his aim and destroyed the German Fleet. "Twenty-eight torpedoes and a fixed determination to take no chances with his battle fleet had robbed Jellicoe of decisive victory."⁵⁵ Yet, it must be remembered that the German intention was not to seek battle with the main British Fleet but rather to wear it down by cutting off a part here and there. Scheer must have been an exceptionally worried man on the 31st of May.

In startling contrast to the German Navy, which never got over its "clearly marked inferiority complex," the Grand Fleet on the eve of Jutland itched for action, confident of success. The Nelsonian tradition of invincibility was ingrained in the British Navy and its officers and men had confidence in themselves, their leaders, and their weapons. None of them ever doubted, even when the war at sea took disastrous turns, that they could beat the enemy. They had all the attributes of the "fittest to win."⁵⁶

Despite the fact that their ships were better than those of the Royal Navy, at no time during the war did the Germans handle them with equal enterprise or spirit; in fact, like the French of yore, they were afraid to sustain ship losses. A higher standard of British seamanship was paralleled by a higher standard of British leadership. British ships, because they ranged worldwide, were looked upon as homes for sailors; German short-range design regarded the comfort of sailors as of no importance. A serious gulf eventually developed between officer and man in the German Navy with the latter bitterly resenting the high living styles of the former. The passivity of the High Seas Fleet after Jutland further reduced morale. By 1917 the men so thoroughly distrusted

their officers that they mutinied. The German Navy had overlooked the fundamental truth that the human factor is always the decisive one.⁵⁷

The person primarily responsible for organizing the Royal Navy of this period was Lord Fisher. He more than anyone else transformed the complacent, somnolent, late Victorian navy into the tremendous machine it was in 1914. In an age when technology was becoming increasingly important, he emphasized materiel; however, by increasing the numbers of ships he also strengthened the morale of the Royal Navy, the very fighting spirit of which in the end counted for more than materiel. Tempered by Jellicoe's caution, this spirit served Britain well.

Jutland, though not a Trafalgar or super-Tsushima, ensured that the High Seas Fleet did not venture forth again until in mutiny and humiliation.⁵⁸ Tactically, Jutland may have been an impossible battle anyway. With no radar or effective wireless communications the forces, covering miles of ocean space, may have been too large for any one man to bring into battle.⁵⁹ And nobody except the late Lord Jellicoe will ever really be able to confirm what it is like to handle a battle fleet of 37 capital ships in the misty North Sea.

The failure to destroy the High Seas Fleet necessitated the Grand Fleet concentration in the North Sea area for the rest of the war, thereby proving to some extent the validity of the "fleet-in-being" theory. At the same time, however, it would have been necessary to blockade Germany in any case, and there is no reason to believe that a close blockade would have been any more effective than the distant one established. The British public in denouncing the "anaemic" blockade policy of the Admiralty in 1916⁶⁰ were obviously wrong, as they failed to consider the political implications of instituting a "tight" blockade. This in effect is what the politically inept Germans did with

their submarines in 1917; having knocked one enemy out of the war, they invited a more powerful enemy in.

For the Royal Navy to have been any more aggressive than it was, as was advocated by Hankey and Richmond,⁶¹ would not have made any great difference. The navy's defensive disposition secured the basic aim of strategy, that is, the specific powerlessness of a given enemy.⁶² To have employed the cream of the navy in more active amphibious operations as the Dardanelles, where the navy acquired a bad name, would not have rendered any quicker decision in the war. Land warfare was at a technological impasse and it would only be broken by the development of the tank and airplane. The focus of action was on the Western Front and the decision when it came was made there, albeit after a bloodbath. In General Fuller's words, "the peripheral endeavours . . . of would-be escapists from the stalemate . . . [were] waste of effort . . . The stalemate laughed each to scorn."⁶³ Clausewitz was correct: in a war against an alliance the aim must be the defeat of the principal partner. In any case, the state of training of the Royal Navy and the British Army, though admirably suited for the First Great War, was in no way geared for amphibious operations. Perhaps the Royal Navy, with its integral Royal Marines, should bear the brunt of criticism in this regard, but if one is to accept Corbett's theory that "sea-power to be effective must be able to draw on and work in concert with a strong professional army"⁶⁴ then a share of the blame must go to the War Office. At least Fisher knew that the army was a projectile to be fired by the navy!

Never again was the Royal Navy to possess such overwhelming might as it had enjoyed in war and peace for nearly two decades.⁶⁵ It might have been a "tremendous technical creature" lacking a brain "commensurate with its body,"⁶⁶ but on the whole its Great

War record was good. By design more than accident, it exercised a command of the sea more absolute than had ever been exercised by any country. It was in the forefront of development, far more than its sister service, the army. It was not made up of Admiral Tryons nor was it led by them but it had trained for and was ready for a war that it knew was coming in its time. In World War II this same navy was not ready to go to war and herein the Trafalgar, or more correctly Jutland, Syndrome manifests itself more fully.

A Sickly Season. At the Armistice in November 1918 more than 1,350 vessels were flying the White Ensign; of these 42 were battleships. By 1920 the ships in commission had been reduced to 332 and the numbers of all ranks from 407,000 to 176,000. A reduction of this sort was to be expected at the conclusion of a war, particularly a war as disastrous as the Great War. On this occasion, however, all previous maxims of British naval policy were reversed in the name of economy. The superiority in naval strength upon which governments had previously agreed was now abandoned in order to maintain a cheap equality with the growing navy of the United States. The "Ten-Years-No-Major-War-Rule" (1919-33) notwithstanding, the British nation had allowed its defenses to deteriorate.

In view of the above, the 1939 remark that "what was lacking was not foresight but hardware" makes some sense. Nonetheless, and curtailment of funding aside, the Royal Navy failed to learn, or forgot, or misread many of the lessons of the First Great War. It was at this point that the negative results of the Trafalgar Jutland Syndrome stand out. Much of this was promoted by the famous "Jutland Controversy" of the 1920s that "induced a backward-looking mentality in senior naval circles which bore little relationship to post-war issues or the way they were

being argued by the country's political leaders."⁶⁷

In attempting to learn the "lessons" of Jutland, naval officers lost sight of reality. In their determination to make the next Jutland a Trafalgar, they failed to realize that the navy was unlikely to encounter again an enemy battle fleet the size of the High Seas Fleet.⁶⁸ A reconstruction of Jutland was the *pièce de résistance* of the work of the naval staff college during most of the interwar period; in 1934 3 days were given to study of the battle, compared with 1 hour on submarine familiarization, and no time to the U-boat crisis of 1917 and the antisubmarine campaign of 1917-18.⁶⁹ There was thus fostered a dangerous preoccupation with grand fleet actions by capital ships. Military men were once again subordinated in thought to the machines of the last war.

The "tactical sterility" induced by the "Jutland myopia" permeated the whole of the Royal Navy and virtually every important appointment went to capital ship captains. Innovative thinking was discouraged and bigger guns and bigger ships seemed the rule of thumb. This attitude persisted even though such venerated officers as Sir Percy Scott, "the Father of modern gunnery" in the Royal Navy, argued that the battleship was dead. "... I regarded the surface battleship as dead before the War, and I think her more dead now, if that is possible."⁷⁰

The most important lesson of the Great War was that U-boat attack on the merchant fleet was Britain's most serious danger and that it was only the introduction of the convoy in 1917 that saved the day. Though perhaps never really fully understood, a mass of anti-submarine experience had been built up by the Admiralty; yet, it was not until May 1943 that the stronger navy of Britain, assisted by Canada and the United States, was able to overcome the U-boat menace. Forgotten were such lessons as the effectiveness of naval

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aircraft in the role of convoy escort in 1917-18, when a mere five ships were sunk in convoys employing surface and air escort. Forgotten also was the efficacy of the "paravane," so successful in neutralizing the danger from mines in World War I; on the outbreak of the Second World War British destroyers were not fitted with paravanes.⁷¹

Several factors contributed to the Royal Navy's neglect of the submarine menace, including overconfidence in the 1917 invention of asdic, renamed "sonar" in 1943. By 1935 most naval staff officers favored convoy in principle and it was generally recognized as common doctrine at the Naval War College, Greenwich. However, enemy technical capabilities were ignored owing to erroneous assessment of enemy intentions. For example, by the end of the First Great War two-thirds of all submarine attacks were being executed at night and on the surface; although technical shortcomings limited their effectiveness at the time, the Royal Navy failed to anticipate that technical improvements might ultimately permit such tactics to work successfully, as they did in World War II. (To be sure, many people did not think Germany would again risk offending neutrals, especially powerful ones like the United States through unrestricted submarine warfare.) Finally, there was the perennial peacetime training problem of not having readymade convoys to practice with. Still, these reasons cannot excuse the navy's failure even to have established an antisubmarine division of the Naval Staff when the war began. Obsession with great fleet actions, and the capital ship specifically, must therefore be blamed in most part for the failure of the Royal Navy to grasp the significance of convoy duty.⁷²

The obsession with the Jutland-type of sea encounter "ran through the navy as a deadening virus." The probattleship faction regarded the onset of the Fleet Air Arm with profound distaste. Capital

ship officers did not fight as hard as they should have against the Trenchard doctrine of the "indivisibility" of the air. The creation of the Royal Air Force on All Fools Day 1918 was indeed a retrograde step and an object lesson to all those who would insist on pushing the twin-bogies of centralization and specialization on any armed force. The net result of this particular action was that the navy got the lesser pilot as well as airplane from the air force, and by the time war came British naval aviation was at least 10 years behind that of the American and Japanese Fleets. At the end of the First Great War the Royal Navy, in quantity and quality of planes and carriers, had a substantial lead over all other navies.⁷³ In 1939 the real British Navy remained the battleship navy with its protected decks and AA guns. When it went down with *Prince of Wales* and *Repulse* it was not by any means in the forefront of development.

This, then, was the ultimate result of the Trafalgar/Jutland Syndrome, which was clearly more evident between the wars than in the navy of the Grand Fleet. The Royal Navy of the Great War was admirably prepared and "ready, aye, ready" for the test when it came. Its major problem in an age of industrial and technological revolution was trying to guess correctly what was on the other side of the hill. This was not the case in

BIOGRAPHIC SUMMARY



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the Second World War; the writing had been on the wall for some time by then and the guessing was much easier. "Midways," fought on the other side of the

world by navies in the forefront of development, assumed their own particular degrees of decisiveness and non-decisiveness.

NOTES

1. Carl von Clausewitz, *On War*, trans. by Michael Howard and Peter Paret (Princeton: Princeton University Press, 1976), pp. 86 and 89.
2. D.M. Schurman, *The Education of a Navy* (London: Cassel and Company Ltd., 1965), p. 179.
3. *Ibid.*, p. 78.
4. *Ibid.*, p. 171.
5. Ian Smart, "From Polaris to the Future," *Dreadnought to Polaris* (Toronto: Copp Clark, 1973), p. 102.
6. Schurman, pp. 10 and 135.
7. Alfred T. Mahan, *The Influence of Sea Power Upon History* (Boston: Little, Brown, 1908), pp. 138 and 288.
8. Schurman, pp. 69 and 78. In the American Civil War it took some time for U.S. officers weaned on Jominian doctrine to realize that capture of place meant nothing; only defeat of the Confederate Army in the field yielded decision. This obvious lesson must have registered on Mahan, who claimed the French Fleet in the 18th century attempted to carry out a war of posts. Mahan, p. 288.
9. Schurman, pp. 5 and 19-20.
10. *Ibid.*, p. 18.
11. *Ibid.*, p. 5.
12. Ken Booth, *Navies and Foreign Policy* (London: Croom Helm, 1977), p. 209.
13. Arthur J. Marder, *From the Dreadnought to Scapa Flow* (London: Oxford University Press, 1970), v. II, p. 7.
14. Theodore Ropp, *War in the Modern World* (New York: Collier, 1962), pp. 232-33. Winston Churchill, then Home Secretary, backed Haldane perhaps because Gen. Sir Henry Wilson argued that if the Germans beat the French in the first "decisive" battles, the Royal Navy would not have been worth "500 bayonets." In any case, Schlieffen anticipated British intervention in conjunction with the French; he was not worried about 100,000 Tommies landing on the Jutland coast or at Antwerp.
15. By summer 1917 there were about 3 million soldiers in the BEF and about 1,700,000 at home guarding the British Isles. Marder, v. II, p. 410.
16. *Ibid.*, p. 49. Sir John Laughton distrusted public opinion and blamed it, correctly, for naval scares. It also led him to favor "the prevailing view of the naval function; that the fundamental purpose for which the navy existed was the battle, resulting in the big victory from which countless happy benefits would emerge." Schurman, pp. 103-4.
17. Marder, v. II, pp. 42-44, 47, and 53.
18. *Ibid.*, v. II, p. 115 and v. V, p. 334; Geoffrey Bennett, *Naval Battles of the First World War* (London: Batsford Ltd., 1968), pp. 77-85 and 99; Schurman, p. 87. Corbett noted that the ideal concentration was not "huddling together" but an "appearance of weakness that covers a reality of strength" (i.e., concentration in time, not space). This was achieved, if inadvertently, by the Grand Fleet at Jutland. *Ibid.*, p. 180.
19. The German battle cruiser *Goeben* (ten 11-inch guns, 25 knots) and light cruiser *Breslau* were in the Adriatic Sea on outbreak of war. They were on the point of interception by Admiral Troubridge (1st Cruiser Squadron) in August, when he broke off the chase because his four armored cruisers were slower and mounted only 9.2-inch guns. Troubridge was talked into the decision by his Flag Captain who was hesitant to engage the more powerful ship. The admiral was subsequently court-martialed and, though honorably acquitted, effectively shelved. Captain Wray, the Flag Captain, was ostracized by the navy. Bennett, pp. 34-38, and 49. The incident reminds one of poor old Admiral Byng, who in 1756 lost contact off Minorca with a hostile French Fleet because he persisted in maneuvering for tactical advantage. The Admiralty had him shot for his trouble; "pour encourager les autres" claimed Voltaire. Bernard Brodie, *War and Politics* (New York: Macmillan, 1973), p. 248.
20. Marder, v. II, pp. 104, 109, 113-14, and 118; Bennett, pp. 91-96 and 105.

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22. Bennett, pp. 113-133; Marder, v. II, pp. 116, 122, and 125. In March 1915 *Dresden* was sunk and in April *Kronprinz Wilhelm* interned. This ended the *guerre de course* of German surface raiders which, to January 1915, accounted for 215,000 tons of 273,000 tons sunk. For the rest of the war raiders accounted for but 227,000 tons, compared with a total of 6.5 million tons sunk by submarines. Marder, p. 127.
23. Schurman, p. 186; Marder, v. II, p. 124.
24. Marder, v. II, pp. 55, 156 and 161-62 and 165. The three cruisers were not zigzagging at the time and when the *Aboukir* was hit *Hogue* and *Cressy* stopped to pick up survivors. They were instead picked off. E.B. Potter and Chester W. Nimitz, *Sea Power: A Naval History* (Englewood Cliffs: Prentice-Hall, 1960), pp. 403 and 410.
25. Bennett, p. 107.
26. Marder, v. II, p. 43 and v. V, p. 334; Bennett, p. 159.
27. Potter, p. 40; Booth, p. 150; Bennett, pp. 165 and 168.
28. J.F.C. Fuller, *The Conduct of War* (London: Eyre & Spottiswoode, 1961), pp. 167-68; Bennett, pp. 168-70; A. Temple Patterson, *Jellicoe* (Glasgow: The University Press, 1969), p. 13.
29. Bennett, p. 256. Had Villeneuve destroyed Nelson's 27 ships of the line, 54 would have been left to protect Britain. Geoffrey Bennett, *The Battle of Jutland* (London: Batsford Ltd., 1964), p. 173.
30. Bennett, *The Battle of Jutland*, p. 5; Potter, p. 451.
31. Booth, p. 238; Potter, pp. 433-34.
32. Bennett, *Naval Battles*, pp. 174-79.
33. Projective design and production were not in the hands of the Royal Navy. Booth, p. 150. Hipper claimed that he was "saved from disaster" only by "the poor quality of the British bursting charges." Potter, p. 438.
34. Bennett, *Naval Battles*, pp. 194-95, 199, 203, and 205-13; Potter, pp. 441, 445, and 447-48; Marder, v. II, p. 10.
35. Bennett, *Jutland*, p. 126; *Naval Battles*, p. 213.
36. Marder, v. III, pp. 181 and 208; Potter, pp. 448-51.
37. Marder, v. V, p. 311; Booth, p. 150. Following Jutland, improvements were made. More flexible "fighting instructions" were issued in lieu of "battle orders." Ships were advised to turn into torpedoes instead of away, and staff work was taken more seriously. Fire control instruments were improved and British ships were strengthened in armor construction and cordite flash elimination. Potter, p. 452.
38. Bennett, *Jutland*, p. 161; Marder, v. III, pp. 186, 209-11, and v. V, p. 300; A. Temple Patterson, "Admiral of the Fleet The Earl Jellicoe," *The War Lords* (Boston: Little, Brown, 1976), p. 8.
39. Marder, v. III, p. 185 and v. V, p. 300; Schurman, p. 187; Patterson, *The War Lords*, p. 8.
40. Bennett, *Naval Battles*, p. 280; Fuller, pp. 172-173; Potter, p. 460.
41. Marder, v. II, p. 127; Bennett, *Naval Battles*, pp. 279-80; Patterson, *Jellicoe*, pp. 54-55. Fisher wrote to Churchill in early 1914: "Again the question arises what a submarine can do against a merchant ship. She cannot capture it, she has no spare hands to put a prize crew on board, little or nothing would be gained by disabling its engines or propeller, and in fact it is impossible for the submarine to deal with commerce in the light and provisions of accepted international law. Under these circumstances, is it presumed that the hostile submarine will disregard such law and sink any vessel heading for a British commercial port?" *Ibid.* In the second U-boat campaign (May-September 1916) targets for submarines were warships instead of merchantmen. Scheer used them in raids and ambushes with surface ships as bait. Jellicoe was particularly afraid of being led into a submarine trap. In the Mediterranean the war against commerce continued unabated. Potter, pp. 434 and 458.
42. Bennett, *Naval Battles*, pp. 280-82; Potter, p. 463; Fuller, p. 160.
43. Patterson, *Jellicoe*, p. 38; Marder, v. II, p. 102.
44. Marder, v. II, pp. 102-3.
45. Schurman, pp. 137, 139, and 154; Marder, v. II, p. 102.
46. Fred T. Jane, *Heroes of Sea Power* (London: Longmans, Green, 1906), p. 107.
47. Marder, v. II, p. 349.
48. Arthur J. Marder, *From the Dardanelles to Oran* (London: Oxford University Press, 1974), p. 49. From 1 January 1916 to 25 January 1917, out of 310 armed merchant ships attacked, 236 escaped (62 sunk by torpedo); out of 302 unarmed ships attacked, but 67 escaped (205 sunk by gunfire from subs). In 1915-16 U-boats generally attacked merchantmen on the surface. Marder, *Dreadnought to Scapa Flow*, v. II, pp. 103 and 354-55.
49. Potter, p. 462.

51. Patterson, *Jellicoe*, pp. 165 and 168. Beatty argued that from an offensive point of view submarines would be attracted to the convoys where it would be easier to find and destroy them. The Admiralty had pinned their hopes on certain new weapons, but Beatty approached the problem on tactical and strategical grounds. Beatty on his own initiative established a system for Scandinavian convoys. W.S. Chalmers, ed., *The Life and Letters of David, Earl Beatty* (London: Hodder and Stoughton, 1951), p. 25.

52. Patterson, *Jellicoe*, p. 179.

53. Fuller, pp. 177-78; Marder, *Dreadnought to Scapa Flow*, v. II, p. 299.

54. Geoffrey Callender, quoted in Marder, *Dreadnought to Scapa Flow*, v. II, p. 3.

55. Donald MacIntyre, *Jutland* (London: Evans Brothers Limited, 1957), p. 140.

56. A point stressed to great extent by Fred Jane. "Had Lady Hamilton been an ordinary woman," he wrote "there is little doubt that Trafalgar might not have been . . . she never came between Nelson and his fervent desire to kill the enemy but had the wit to accentuate it. Those 'services to the country' in connection with which her claim was so scornfully denied were greater perhaps than has yet been realized . . ." Jane, pp. 321 and 325; Marder, *Dreadnought to Scapa Flow*, v. II, pp. 19, 436, and v. V, pp. 342-44.

57. Marder, *Dreadnought to Scapa Flow*, v. II, pp. 19 and 46, v. V, pp. 311, 332-334 and 344. Interestingly enough, the British officer, though playing games with his men and taking an active interest in their welfare, never provided them with lifejackets as the Germans had their men.

58. Ropp, p. 235.

59. MacIntyre, p. 195.

60. Marder, *Dreadnought to Scapa Flow*, v. II, p. 377.

61. *Ibid.*, p. 413. M.P.A. Hankey, Secretary to the Committee of Imperial Defence and Member, War Cabinet.

62. Ropp, p. 234.

63. Fuller, pp. 161 and 164-65.

64. Schurman, p. 5.

65. Marder, *Dreadnought to Scapa Flow*, v. V, p. 342.

66. Schurman, p. 125.

67. B.D. Hunt, "Smaller Navies and Disarmament: Sir Herbert Richmond's Small Ship Theories and the Development of British Naval Policy in the 1920's," *Dreadnought to Polaris*, p. 49.

68. In their defense, it must be pointed out that Japan and not Germany was long regarded as the most likely enemy of Britain. Marder, *From the Dardanelles to Oran*, p. 41.

69. *Ibid.*, p. 48.

70. Hunt, pp. 49 and 51. Admiral Beatty was decidedly probattleship as First Sea Lord. In 1920 he said: "In our opinion the capital ship remains the unit on which sea power is built-up . . . It is . . . possible that the present battleship will change to one of a semi-submersible type, or even a flying type, but such types are visions of the far future, not practical propositions of the moment . . . the immediate abandonment of the capital ship in favour of a visionary scheme of aircraft and submarines would leave the British nation destitute of sea power and without the means of progressive training." He did, however, fight to retain operational control of the Fleet Air Arm and in 1923 prophesied that "fleets of the future will be commanded by naval officers with as intimate a knowledge of the air as of the gun and submarine . . . and it may well be that in the future . . . [a fleet commander] will be quartered on board an aircraft carrier." He nonetheless opposed Scott, Chalmers, pp. 360-62.

71. Marder, *From the Dardanelles to Oran*, pp. 38, 44, and 49; Schurman, p. 188.

72. Marder, *From the Dardanelles to Oran*, pp. 40, 42, and 47; Schurman, p. 188.

73. Marder, *From the Dardanelles to Oran*, pp. 48, 55-56, and 88; Chalmers, p. 360.

