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Speculations—II

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SPECULATIONS—II.

"THE FUTURE OF THE BATTLE FLEET."

By LIEUT. W. S. KING-HALL, Royal Navy.

[NOTE.—The following paper is the second of a series dealing with some of the possibilities in future warfare. Speculations—I appeared in the issue of this JOURNAL dated February, 1920.]

FOREWORD.

THESE speculations are conceived from the point of view of the British Commonwealth; such procedure is perhaps less impressive than would have been treatment of the subject from an abstract standpoint, but it seems to have the merit of being more practical.

War is such a very practical business that in writing about it we should be practical, that is to say, simple.

For example, except after a full stop, war should not be written with a capital "W," nor should it be hinted that there is a dark, profound mystery in the business, which can be illuminated and plumbed by catch phrases and sentences torn from Clausewitz's context, or other standard works.

To write in this manner is to suggest that there is a War Students' Trades Union, whose secrets will sometimes be partially revealed to the outsider.

War only differs from other enterprises undertaken by man in that the issues at stake are more tremendous and dramatic than those depending on the outcome of most transactions of peace.

PART I.

In April, 1917, the British Empire was perilously close to defeat owing to the sinking of world tonnage by the German U-boats. In this fact lies the greatest of the many lessons to be learnt from the last war.

It will be suggested in these pages that if we mean to profit by this lesson, we must revise our present attitude towards naval warfare and adopt what will seem to be a new attitude, but is in reality very old; we must rid ourselves of many comfortable theories and look into some uncomfortable facts; we must be prepared to find that our ideas as to the composition of a fleet are in error, and that we have spent millions of pounds on a tool which is only capable of doing half the work which may be necessary in war.

These statements, if correct, are disturbing; but in a business, if a mistake is made it often pays to cut losses without waste of time.

Preparation for war and war is a business.

During the past centuries English opinion has almost continuously believed in the doctrine that the immediate purpose of the Fleet is to destroy the enemy's armed ships.¹

There has been, and may be still, a school of thought who argue that the Navy can efficiently fulfil its task without destroying the enemy fleet in battle, but this opinion has not been that of the majority.

It will seem strange to a historian a hundred years hence, that though the evidence shows that the British Fleet from 1600-1920 was brought up on the theory that its main business was to destroy the enemy in battle, yet for months on end between 1803-1805 and 1914-1918 (to mention only two periods) the Fleet could not translate its theory into practice. Our imaginary historian (probably a learned civilian) may write rather pompously:—

“From the middle ages until the close of the Great War practice gradually became divorced from theory. At the conclusion of the Great War a deep impression was created as a result of the nearness to defeat in 1917 of the old British Empire. It was realized that practice must be re-introduced to theory before the next war, and close attention was paid to the scanty records of naval warfare in the pre-Christian era and all examples of later date in which, as at Copenhagen, a fleet destroyed its opponent notwithstanding all obstacles.”

* * * *

It is important to establish why the Navy was not able to put its theory into practice for long periods during 1803-5 and 1914-18.

The answer is simple. The enemy fleet sat in the fortified harbours of Brest and the Elbe River.

Were these sufficient reasons to prevent us attacking them?

According to our theory they were not, but in practice they were. The truth was that the British Fleet was *not designed* to destroy the enemy fleet in battle, either in 1803 or in 1914. It was designed to destroy the enemy fleet in battle *at sea*. It was a one-handed fleet, instead of being ambidextrous. This is no new discovery. Our great-grandfathers, leading a life during Cornwallis' blockade off Brest compared to which Scapa Flow was a bed of roses, longed to get at the French Fleet.

We find Captain Puget (the original author I suspect to have been that dare-devil, Lieut. Ussher), writing to Cornwallis on 23rd June, 1804, and enclosing his plan for attacking the French Fleet

¹ The writer's belief in this well-flogged question is as follows: "Object of the Navy to control sea communications, therefore it follows that the immediate ideal should be destruction of enemy forces, for when they are utterly destroyed, most of our fleet can go on leave; the control of sea communications being carried out by Ministry of Shipping and Foreign Office."

in Brest.¹ Cornwallis passes it on privately to Lord Melville, who on 10th July replies:—

*"The national advantages attending its success are too obvious to require illustration."*²

Cornwallis to Melville on the 11th September writes:—

*"It is a daring service, but I have always been of the opinion that much might be done by surprise, and I have formerly thought that our ships, though superior to all the world at sea, were not always so secure at anchor."*³

For reasons which are not all very clear, except that amongst other causes was the fact that the Naval Members of the Board threw cold water on the enterprise, the project was abandoned on the eve of execution.

One can imagine Captain Puget, sick at heart with the prospect of another winter's work off Brest, when he wrote to Cornwallis on the 23rd of September, 1804⁴:—

"Sir,—The presentation of plans to you lately for harassing the enemy have been so frequent that I have been deterred submitting the enclosed. . . ."

There is an echo of what must at this time have largely occupied the minds of the officers in Cornwallis' Fleet, in a letter from the Mediterranean, written on the 30th December, 1804. Nelson writing to Cornwallis, said:—

"We could always beat a Frenchman if we fought him long enough: that the difficulty of getting at them was oftentimes more people's own fancy than from the difficulty of the undertaking: that people did not know what they could do till they tried, and that it was always to err on the right side to fight."

Before passing to 1914-18 it is of interest to note that it was fully recognized in 1804 that the seagoing fleet was unsuited for this task of harbour battle.

Almost apologetically does Captain Puget ask for special material; he emphasizes the small quantity he will require, but he states plainly to Cornwallis in his opening letter of the 23rd June:—

"As the success of this enterprise must principally depend on equipment and fitting these vessels (special fire-brigs) . . ."

There is also mention in a letter to Cornwallis from Admiral Young at Plymouth, of special grapnels, the parts of which were made by different men in order to ensure secrecy.

¹ Letter 281, Blockade of Brest, Vol II, N.R.S.

² Letter 281, Blockade of Brest, Vol. II, N.R.S.

³ Letter 291, Blockade of Brest, Vol. II, N.R.S.

⁴ Letter 348, Blockade of Brest, Vol. II, N.R.S.

More than a hundred years later we come across certain young officers putting forward startling schemes to attack the High Seas Fleet in Schillig Roads with fast motor boats and torpedoes.

The main idea of the scheme never materializes, but the idea of the motor boat becomes the C.M.B. and does useful work in 1918 at the small harbour battles of Zeebrugge and Ostend.

From these episodes, a hundred years apart, two conclusions can be drawn.

In the first instance it seems as if in each great war there was an underlying feeling that somehow or other it was wrong just to sit and wait for the enemy to come to sea. If he would not come out, then we must go in; that summed up the matter. But in each instance one has the impression that these disciples of the harbour-attack doctrine did not carry enough weight to impress their ideas on the men who directed British naval strategy. Perhaps they would have been better at forcing their way into Brest or into Schillig Roads than they were at stating their arguments. Why the attacks did not materialize is of secondary importance; it is sufficient for our present purpose to note that this feeling that something should be done to get at the enemy fleet has been latent in the Navy.

The second conclusion which can be drawn is that special material is required.

In 1804 it was a special type of fire-brig, with grapnels (specially made), etc.

In 1914-15 it was a special form of motor boat with special arrangements for carrying and discharging a torpedo.

Nowhere do we find a hint that the main battle fleet itself could do anything save wait in a hopeful attitude.

At the risk of becoming monotonous I want to repeat again that the battle fleets of 18th, 19th and 20th centuries were designed and trained "To seek out and destroy the enemy; but *only when he was at sea.*" A man of genius rose superior to this limitation at Copenhagen and to a lesser degree at the Nile, but no genius could have taken the Grand Fleet into Wilhelmshafen in the last war and returned.

* * * *

I propose leaving the first thread of my argument at the point it has reached in the preceding paragraph and picking up the second at its beginning.

Lord Melville said of the first Brest proposal:—

"The national advantages attending its success are too obvious to require illustration."

Let us speculate.

In 1804 England was experiencing the sensation that she was face to face with a great crisis in her history; we know the feeling, we had it in March and April, 1918. I feel pretty certain the Government had it in April, 1917,¹ though the Censorship veiled it from the people on that occasion.

¹ Vide "The Victory at Sea," Chap. I, by Admiral Sims.

In the autumn of 1804, Napoleon's great invasion plan seemed nearly ripe to bursting point. Nelson, Cochrane, Cornwallis, and Lord Keith kept anxious watch from Toulon to Boulogne.

If the 8th October coaches had carried the news through England that on the 1st October the gallant Osborne and Puget with 153 men had destroyed the French Fleet in Brest (and it must be remembered that the men on the spot from Cornwallis downward believed it could be done), the country would have breathed one huge sigh of relief.

Napoleon's letter to Decrès in such circumstances would have been worth reading!

Yes, it would have been a notable day and perhaps changed the history of the world and saved Nelson's life; but by no stretch of imagination can we say that upon it depended, or even seemed to depend, the fate of England.

Change the scenery and raise the curtain at No. 10, Downing Street. Time: April-May-June, 1917. But first a few stage directions. England, the keystone of the Imperial arch, is, with the possible exception of Japan, the only country in the world which depends for the continued existence of its inhabitants upon food brought across seas.

The Empire is at war, these islands have become its chief arsenal, and the raw material which modern war consumes so greedily, must also come across the seas.

Tonnage is being sunk by U-boats at a greater rate than it is being replaced.

Expert jugglers with figures have proved that if the rate of decrease is not diminished, the minimum figure will be reached on 1st September, 1917. They have neglected the morale factor; so let us suppose 1st October to be the ultimate date upon which we shall be faced with the problem of making 2 plus 1 equal 4. *Dramatis Personæ*: The Cabinet; The Admiralty.

THE CABINET: Here is the situation: The fate of the Empire depends upon your success in reducing the rate of sinking. What can you do?

THE ADMIRALTY: The solution lies in sinking more U-boats. There are two alternative methods of achieving this:—

- (1) The rate of U-boat destruction could be increased on the high seas if we had more destroyers, more P-boats, more submarines; in short, more material.
- (2) It could be increased were we able to employ the material we have got, close up to the exits from which the U-boats proceed on to the British lines of communication.

The first method, which we are now engaged upon, is bad strategy, for our forces are dispersed; the second method, were it possible, would be good strategy.

THE CABINET: Why cannot the second method be employed?

THE ADMIRALTY: Because our light craft cannot work off the German bases, since in those ports lie the High Seas Fleet. Our

craft might be able to work there for a few days supported by the Grand Fleet, but we want to work there for several months.¹

THE CABINET: Since your first method of increasing the rate of destruction of U-boats demands time and more material—two things we cannot produce—we are obliged to fall back on the second method, which seems to demand as an essential preliminary the destruction of the High Seas Fleet.

THE ADMIRALTY: That is so.

THE CABINET: Can the Grand Fleet do it?

THE ADMIRALTY: If the Army cannot turn the German right flank and take the German coast line in rear, and if the Cabinet's opinion is that it is a case of neck or nothing, then the Grand Fleet will seek out and endeavour to destroy the High Seas Fleet. But success is doubtful, since the Grand Fleet is neither designed nor trained to do this work.

* • *

The above phantasy very nearly became an unpleasant reality; there can be no doubt that we might have had to destroy the High Seas Fleet to save our Empire; and it is equally certain that our material was quite unsuited for the purpose.

What of the future? Are we likely to be faced with the same problem?

In 1914 there was a comfortable saying: it ran something like this, "*guerre de course*, or war on trade, can never win a war." It was not accurate, for the English forced the Dutch to their knees in the 17th century by cutting off the sea trade on which the Dutchmen lived; nevertheless, it was a comfortable saying in the ears of Englishmen who depended for their existence on overseas communications.

The exploits of the "Emden" shook it a little, but it perked up on remembering that "we lost more trade ships after Trafalgar than before, and still we won that war."

In February, 1915, the German system of U-boat *guerre de course* made its début.

The "saying" fell into a decline, and by April, 1917,² it was dead; heaven forbid that because we won the last war there should be a resurrection.

"War on trade *can* win a war against England to-day." Why was it then that the French in the 18th and early 19th century failed to make it do so whilst the Germans in the 20th century almost succeeded, and possibly only failed because they did not allow Tirpitz to have his way?

¹ "The German Fleet was the bulwark behind which the U-boat campaign grew up." (From a report of a speech by Admiral Lord Beatty at Liverpool.)

² "The function of the High Seas Fleet is to secure the U-boat bases and the approaches thereto." (Said by the captain of a U-boat to the writer in February, 1918.)

² In this month the U-boats sank 875,023 tons of shipping.

The situation in the 20th century differed from its predecessor in several important particulars. In the first place, the British Islands have during the last 100 years rapidly become highly industrialized, and therefore more dependent for food and raw material on oversea supply. In the second place, Germany employed submarine cruisers which were not only harder to cope with than surface ships, but enjoyed the advantage of operating against our trade whilst we were still busily experimenting in endeavours to discover methods by which under-water craft could be located and destroyed.

Modern practical submarine work dates from 1907; a similar point in anti-submarine effort was not reached until 1917. These ten years made a big difference, and we have every reason to be proud of the rapidity with which we recovered some of the lost years. If we take the figure 100 to represent either the tonnage, or the food and materials, which normally come to the British Islands in a year, experts can calculate what percentage of this figure would suffice as a bare minimum on which to feed the people in peace, or feed the people and supply the armies in a given war. The value of this percentage has unquestionably increased greatly during the last century.

In 1805 it may have been as low as 30 per cent., that is to say, we could have lost 70 per cent. of our imports and still continued the war. In 1917 it was probably in the region of 60 per cent. There seems no reason to suppose that in the future it will get less, everything points to it rising. In any event there is no doubt that a certain *factor of safety* does exist, and that if our enemies can reduce our volume of sea imports below this figure we cannot continue the war.

Without guessing at actual figures, whose precise numerical value does not affect the argument, let us assume that in April, 1917, the Factor of Safety was "X." Then at that moment the strength of the structure was actually X plus DX, where DX was a diminishing quantity which the U-boats seemed likely to be in a fair way to eliminating within a few months. Of course they did not eliminate it; we pulled through, and in 1918 "DX" was a little bigger than "DX" had been in 1917. This fortunate circumstance was at least as much due to the hampering effects of politics on the U-boat war as it was to anti-submarine efforts, though the latter were very fine. In the future we cannot bank on enemy politics helping us.

* * * *

I have tried to show in the preceding pages :

That though the British Fleet exists for the purpose of destroying the enemy's fleet, it can only do so in the special case of the enemy fleet at sea.

That this fact has been felt to be a weakness in the past, and that efforts to remedy it all depend upon the addition of special material (and training) to the Fleet.

That this addition has not been made in peace time.

That whereas in the Napoleonic wars the destruction of the enemy fleet in its base may be described as being then a desirable luxury, in the late War it nearly became an imperative necessity, and that in a future war it may become an imperative necessity.

That if the above conclusions are sound, they lead to the decision that the safety of the Empire demands a fleet which can ensure the destruction of the enemy's main forces *wherever they may be*.

The possible lines of development which, if followed, would lead to such a fleet are considered in the second part of this paper.

PART II.

The problem to be solved is as follows :—

"The enemy fleet is in a heavily fortified base; the destruction of that fleet is necessary in order to win the war."

Ignoring combined operations, which are outside the scope of this paper, a solution can be sought in two ways. Either we can attempt to destroy the enemy in his base, or we can attempt to make him come to sea and accept battle with our seagoing fleet.

To destroy an enemy in a strong base can never be impossible, but its achievement may demand such expenditure on special material that it becomes uneconomic.

No doubt naval constructors could give us a fleet of curious, slow-moving, torpedo-proof, mine-proof, gas-tight, 40-inch armoured, net-cutting, submersible monsters, capable of penetrating anything except a breakwater.¹

But they would be built at the expense of the sea fighting fleet; we should still have a one-handed fleet and be no better, probably worse off, than we are at present.

Here we face the first difficulty, which is this: How can we give our present fleet a right-handed punch for use against an enemy in harbour without weakening the straight left it needs if the enemy comes to sea?

We need special material, but we must put forward modest demands. If this principle be agreed upon we are obliged to eliminate :—

- (i) Any idea of special long-range (100,000 yards) guns mounted in ships unless these guns are going to be equally useful in a sea-battle. Their use against a fleet in harbour implies aerial supremacy over that harbour, and the chances are that as we are far from our base and he is at his, the boot will be on the other leg.
- (ii) Bombardment from the air: If we intended to employ this method of destroying him, we should have to devote half our Naval Estimates to aircraft. Half the Navy may be in the air in time, but we shall probably be in our graves or club armchairs before that happens.
- (iii) The construction of a special fleet of harbour penetrators.

If the above are forbidden fruit, the only alternative, in the writer's mind, is the adaptation of chemical warfare to this naval requirement.

¹ The embryo of some such ship was used by the Italians in their attack on Pola, 14th May, 1918. (See R.U.S.I. JOURNAL for May, 1919.)

Gas (at present) does not attack material but personnel. In open sea warfare every effort is made to destroy material, since personnel are so tied to their material that the destruction of the ship usually involves that of the men.

In land warfare, the distinction between efforts to destroy material and those to destroy personnel are more widely separated.

The men who invented grape shot, langridge, shrapnel, and the machine gun realized that a very small missile knocked out a man, and that against exposed personnel 16,000 one-ounce missiles gave much better results than one 1,000-pound shell, which might break up into a few hundred effective pieces.

The chemist has improved on shrapnel; he has given us gas with its immense number of projectiles in the shape of molecules. The density of the projectiles is such that several square miles can be brought under effective fire. Nothing in that area can hope to be missed by the gas molecules. Though they have a great disadvantage in their slowness of flight, and dependence on the wind, the point to bear in mind at this juncture is that the bedrock of chemical warfare is the immense number of man-killing missiles which can be diffused over large areas.

* * * *

The strength of the position of a fleet in a defended base need not be laboured, but it has one conspicuous weakness—as long as the fleet stays in that base it has lost mobility.

Naval history is so replete with the difficulties of the problems in which the British Fleet has had to find the enemy, that it is evident that the knowledge to within a few miles of the exact position of our objective is a great advantage to us. If the whole problem we are discussing is looked at broadly, this knowledge solves half our difficulty.

“We know he is in X.Y. Right. At him then!”

How much more encouraging this sounds than:—

“We know he was at X.Y. a week ago. Right. Where shall we look for him now?”¹

I suppose our present fleet to be as perfect an instrument for open sea fighting as can be built and trained to-day.

To that fleet I suggest adding a certain number of submarines fitted to discharge gas and a certain number of gas ships. Both submarines and gas ships would carry gas in liquid form. The employment of these vessels would be somewhat as follows:—

METHOD A: THE DIRECT ATTACK.

The main battle fleet occupies a covering position. The submarines get as close to the base as they can and discharge gas with an onshore wind.² The result will be that every man in the hostile

¹ Please forget all about the North Sea, and think of big areas.

² The Sailing Directions afford food for thought in connection with the direction of prevailing winds in various parts of the world.

fleet, every soldier in its forts, every workman in its dockyard, every inhabitant in the town (should there be a town) will have to put on a mask. Perhaps our gas beats their mask, perhaps it does not. Take the worst case and suppose the mask to beat the gas. Life in a gas mask becomes monotonous after some hours. I do not think dockyard maties or town councillors would like to spend twelve hours of every day in a gas mask. The C.-in-C. might find it rather trying after about the tenth day. I believe we could make life so intolerable for that fleet that they would be driven to take the only step which would enable them to avoid the gas, i.e., they'd have to move. They could only move one way, and that way would be to the open sea; we should get our battle.

METHOD B : THE INDIRECT ATTACK.

The direct attack has failed; the onshore wind did not come up to expectation, or the gas submarines went up on minefields, or the one thing we never thought of unfortunately turned up, etc. The result is a fresh situation, which is dealt with as follows:—

The main fleet moves a few hundred miles down the coast, leaving submarines off the enemy base. It takes up a covering position between the enemy main base and the flourishing commercial port of X.Y.Z.

The gas ships arrive off X.Y.Z.; only half-a-dozen little ships each of 4,000 tons, and escorted by suitable light craft.

Six hours' notice to evacuate the town is given (if the enemy has been playing the game at sea), and then the gas squadron gets busy. It would probably be unnecessary to use lethal gas.

Put Liverpool in the position of X.Y.Z. One can imagine the hurried Cabinet meeting, the hasty reversal of naval policy, the telegram insisting on the fleet putting to sea to drive off the gas ships. . . . In the middle of the excitement news is received that two vessels thought to be gas ships have just arrived off the port of P.B.X. . . .

We should get our battle.

CONCLUSION.

All war problems revolve upon the question of overcoming or maintaining the defensive. In France, in the last war, both armies were up against this question. Looked at from the British side our army knew that until they could break down the German defensive system and destroy, or threaten to destroy, the German Field Army, the war would not be won.

To break down this defensive, two new things were brought into being:

1. Immense artillery power.
2. Mechanical warfare.

The Army had to devise, make and test these things in time of war, when every moment was precious.

Though it is true the Navy had to improvise the anti-submarine business, it was on the whole more fortunate, in that by the old methods it succeeded in doing its share in the war. We may now hope for years of peace; these are the years in which to overhaul our methods.

It might not be a bad thing to inscribe above our battle honours and over the portals of our schools of instruction :

APRIL, 1917.

TONNAGE SUNK, 875,023.

POSITION OF HIGH SEAS FLEET : ELBE RIVER.

"Lest we forget."