



## The Relations between Local Fortifications and a Moving Navy

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GENERAL SIR FREDERICK C. A. STEPHENSON, G.C.B., Vice-President, in the Chair.

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THE RELATIONS BETWEEN LOCAL FORTIFICATIONS  
AND A MOVING NAVY.

By Rear-Admiral P. H. COLOMB.

In a lecture delivered in this theatre on the 18th January Captain Stone of the Royal Artillery made a sort of excursus into the domain of naval action and policy, when discussing the employment of "Quick-firing Guns for Fortress Defence."<sup>1</sup> In laying down certain propositions with regard to the respective functions of a moving Navy and fixed fortifications, and in declaring himself a "looker on" at the game of a combined effort, or of a rival effort, between these two elements of defence, I thought Captain Stone was doing good service in challenging, *ab initio*, those who supported or denied his positions, to come out, and state their case. As I listened to the lecture and to the discussion, I came to the conclusion that probably neither lecturer nor audience had exerted the critical faculty in sufficient strength to notice how far an acceptance of the propositions put forward might lead us if we followed them up; and at the same time, I felt that under a paper with a secondary title, it would hardly be convenient to raise a full debate on primary issues.

But those who listened with me, must, I think, agree that primary issues of great moment were raised in the paper, and pronounced upon with decision in a way which does not wholly accord with some presumably careful examinations that have been recently made.

The paper on the "Naval Defences of the United Kingdom,"<sup>2</sup> which I had the honour to read here last year, did undoubtedly tend to raise the value of moving naval defence and to depress that of locally fixed defence. Captain Stone's paper, to which, so far, this is a reply, unquestionably took the opposite view, and practically claimed that "Naval Defence" was a contradiction in terms; the rôle of the Navy not being defence at all, but attack. Here, as the lawyers say, "issue is joined" and most conveniently so for discussion. It is seen that a very wide divergence of opinion is not only possible, but is in flourishing existence, on the subject of the relations between fixed fortifications and a moving Navy, and I hardly

<sup>1</sup> See *ante*, p. 1.

<sup>2</sup> See *Journal*, vol. xxxii, p. 565 *et seq.*

think we can better employ a couple of hours than by endeavouring to thrash out some of the truth as to these relations.

In the Navy I venture to think that we ought to be a great deal more critical and observant than we are on the subject of our fixed, or localized, defences against naval attack. And though I advert to the matter with the greatest possible diffidence and deference, I sometimes fear that the Army is hurting its efficiency by pressing forward the idea of strong coast works at home and abroad. I sit at the feet of Colonel Maurice so far as I form any notions of military policy, and I fail to see how such views as he expresses stand any chance of being carried out, if we are to greatly shut up the military forces of this country in detached garrisons all over the world.

With still greater deference, and very humbly indeed, I venture to say that in our military policy, I seem to detect three incompatible lines being pursued. There is the line which steadily regards the invasion of these islands, not as a possible conclusion to a series of disasters such as history furnishes us with no examples of, but as an incident of war at least as prominently near us as a great sea-fight. This line, when pursued, demands the raising, maintaining, and training of a vast body of troops on principles such as we find in continental countries, and it will ask for the fortification of London, at least, if not for converting defensible points surrounding London into a series of first class fortresses. It was this policy that dictated the great land-side works which profess to defend the Arsenals of Portsmouth and Plymouth.

The second line of policy is what I understand to be that of Colonel Maurice, where the Army is to be prepared for embarkation under the convoy of, and disembarkation under cover of, the Fleet, for those sudden military attacks at unprepared points of the enemy's shores, which the rapidity and certainty of transport over a commanded sea, makes easy for this nation.

The third line of policy is that sketched by Captain Stone, if I rightly apprehend him, namely, the dispersal of the Army all over the world in detached garrisons.

The three lines of policy would seem to me to require three separate armies to carry out in their entirety; and if I endeavour in this paper to show cause against the last of them, where my naval knowledge, and some study of the question may justify me in holding an opinion, I trust I shall not have intruded too far on military ground in mentioning the first and second.

Nothing could be more satisfactorily clear than Captain Stone's expression of view: and it is always an advantage to the solution of a controverted question to start with a clear enunciation.

"My premiss is," says Captain Stone, "that the possession of naval arsenals, dockyards, and coaling stations must practically decide the question of naval supremacy; that such supremacy is absolutely essential to our existence as a nation; and that the way to secure it is to fortify and arm our own arsenals, dockyards, and coaling stations in such a fashion as to enable them to resist an enemy's attacks, and at the same time to give a free hand to the Navy to attack those of

the enemy with such force as may be available, after providing for the patrolling of our principal trade routes, and the formation of such fleets as may be considered necessary to enable us to force on a naval engagement when opportunity offers, with forces adequate to inflict a crushing and decisive blow on the enemy."

The main view here is that the fortification of posts described will enable a given naval force to do things which it could not do were the posts left locally undefended; and a principle underlies it, declaring that naval force is not properly a defensive, but an offensive force; while military force, concentrated in localities, is truly the defence of a maritime empire.

Sir John Adye, in a letter to the "Times" last year, on which I had the temerity to offer some criticism, did not quite take up the general relations between fortified harbours and moving fleets, but he spoke of "adequate land defences of our harbours" being the "complement" of their naval defences. He presupposed, however, at least so far as our home ports are concerned, a loss of the command of the sea, and an enemy free to attack without fear of interruption from the sea. He said: "As regards land defences, I would point out, in the first place, that should this country be threatened with attack by an expedition across the sea, it is very important that our enemies should be denied access to our harbours, and should be compelled, at all events, to make their attempt on the open coast. Their chances of success will be much minimized if they have no secure base of operations." (Sir Edward Hamley used, I think, the same argument in the same way.)

"That is one point, but there are others. When hostilities arise, our vessels, whether of war or of commerce, will often require to return to port to discharge their cargoes, or to obtain supplies of coals, munitions, and food, &c. They may also have to take refuge in consequence of damages in action, or by stress of weather; and when necessity thus compels them to seek a harbour of retreat, it is essential that they should be able to refit in security, and be free from molestation."

At this point I must discriminate a little. We can see that the same view precisely does not animate the minds of two military men, one of whom brings to it the weight of experience in a long and very distinguished career; while the other must treat it by the light of a less experienced intelligence, which even a short career has shown to be of a high class.

Present to Sir John Adye's mind is a picture of more or less failure of our naval forces, more or less incapacity to protect territory by purely naval means, or more or less defeat at sea. If fortifications are necessary to "deny the enemy access to our harbours," if they are required to enable "vessels whether of war or of commerce, . . . to return to port to discharge their cargoes or to obtain supplies of coals, munitions, and food, &c.," this must either be because of the inability of a moving Navy to do it; or because the military defence by fortifications can do it equally well at a much more economical rate. If fortifications are necessary to enable ships to take refuge

under after damages in action, or by stress of weather, the conception must be that the enemy has beaten them so much as to be able to follow them up, and to be only prevented from annihilating them, or hindering the restoration of their efficiency, by the fortifications within which they have secured themselves.

These several conditions do not appear to be at first present to Captain Stone's mind. In his view the Navy is in full competence and efficiency. There is no question of its failure in any way. But fortified arsenals and ports of supply are a *convenient method of releasing naval force which must otherwise be detained locally for the defence of the ports*. It is, in Captain Stone's conception, a fundamental postulate of naval warfare, that when an Admiral leaves the arsenal from which his fleet emerges complete, for the purpose of an attack on one of those of the enemy, he must be assured that his own port is thoroughly well locally defended. And the inference is that if it is not thoroughly well locally defended, he cannot attack, for he must remain there to defend it himself.

Undoubtedly both sets of opinions as to the relations between fortified ports and a moving Navy are largely held; and the holding of them is not confined to the military service. Being largely held, it almost inevitably follows that there must be, somewhere, a certain amount of truth about them. But, on the other hand, I think it may be safely said that none of them would arise naturally out of the study of naval history. More than that, I think they do not arise directly from the reason of the thing, when we come to face it.

I rather think such thoughts are not the cause, but the effect, of fortified ports. Having observed fortified ports all over the world, we have imitated, without much close examination, that which we have seen, and applied it to our own ports; having done so, we search for and produce such *raisons d'être* as we are able, to account for their presence, and then we call in those *raisons d'être* as an argument for the extension of the system.

The importance of the question I raise, and the difficulty in dealing with it, spring from the fact that, *primâ facie*, no one denies the value, if not the necessity, of a certain amount of local defence for the ports of a maritime empire. But then no one knows where to stop. I can never forget that while many military and perhaps more naval men think that the gigantic defensive works of Portsmouth and Plymouth have been over-done, Colonel Schaw demanded, in this theatre, in December, 1886, that 833,000*l.* more should be spent upon those at Plymouth before they could be in any way considered complete. I need hardly advert to the Report of Mr. Stanhope's Committee last year. It will be fresh in all our minds that the demand for local works, both new and additional to old ones, was very large indeed, and that the actual millions taken up by loan for this service did but partly represent the view which was put forward as to the necessities of the case.

Who is to fix the degree of fortification at which the local defence of a port should stop? If an authority declares the fortification of any port is insufficient, what arguments can we use to prove that it is

sufficient? As a naval friend of mine, for whose opinion I reasonably have a high respect, has said: "There is nothing between a light battery and a first class fortress." I, myself, have generally felt that the arguments which will call for any fortification of a port against attack from the sea will equally apply to ask for its defence against all the navies of the world. I cannot tell, myself, what the measure of the defence ought to be; and the only certain check I know, upon expenditure on local defences when once we begin, is our general way of looking at it.

It does not appear to me to be of any use saying that defence by the fortification of ports and defence by a moving Navy must go hand in hand. Were they both under the same administrative control—which could only be naval control, with any reason—they might be dealt with side by side, though I do not think that even then they could be said to go "hand in hand," but as we stand they are rivals for the open palm of the Chancellor of the Exchequer, and nothing is to be gained from not recalling the fact and stating it plainly. The reason of the thing, and the history of the thing, come to my mind with a plain conviction that fortification of ports is but an inefficient substitute for their naval defence, and that as we propose a naval increase we should logically propose a fortification decrease.

But the reverse is our policy, and the moment the naval experts urge a naval increase, the military experts, and sometimes the naval ones too, are equally, if not more urgent for local port defences.

I should like to say here, that for the purposes of my argument, and to keep it clear of side issues, I wish to roll the fortification which is got out of land batteries, coast defence vessels, and submarine mines, all into one. When I speak of fortified ports, I mean ports that are locally protected against attack, whatever the means used may be. But I do not include such local and movable defences—such light vessels—as may be prepared not to defend the port itself from attack, but to warn off the roving cruiser which might seek either to blockade the place, or to capture or destroy the unarmed ships frequenting it.

I draw a distinction, in fact, between the defence of the port against attack, and the defence of the communications of the port.

As I have said above, I think the best standard we can at present erect as to the share which fortifications should carry away from the till of the Chancellor of the Exchequer, is one dependent on our general way of looking at the whole question; and I do not know that there are any proper spectacles through which we can see, except the historical spectacles.

But let me first follow up the thoughts that have formed themselves in Captain Stone's mind as consequences of the thesis used as a starting point.

Looking at the functions of the Navy he tells us that, "upon the declaration of war one of the first duties of our Navy will be to attack the enemy's military ports, dockyards, and coaling stations, and thus secure heavy odds in our favour from the outset. In order to secure the greatest results, the rôle of our Navy must be essentially offensive, and it is much to be regretted that an unreasonable dread of bombard-

ment should have been aroused recently by the naval manœuvres, tending to form an uneducated public opinion in favour of keeping our fleets in home waters in any national emergency. Bombardment is an operation which requires a vast expenditure of ammunition and a considerable time to be effective, and the material damage inflicted is by no means proportionate to the cost of the undertaking, or to the risk incurred in carrying it out."

We have here the development of the initial idea. Our fleets are absent making attacks on the enemy's ports, which must be, by the hypothesis of possible attacks behind the fleets, well known to be empty of the enemy's warships; these latter being, as a consequence, free to do what seems good to them. But they are withheld from attacking our arsenals because of the strength of their fortifications, and from bombarding where there are none, because of the cost and tedium of the operation.

"I will venture," continues the lecturer, "to touch upon one more naval question, and that is the question of blockade. It has been stated that to spend money on land defences, while our Navy is admittedly insufficient in numbers, strength, and speed for the duties it will have to perform, is an altogether mistaken policy; and further, that if our naval strength were increased as it ought to be, there would be little or no necessity for any land defences at all, inasmuch as the enemy's ports could be so efficiently blockaded that our shores, our commerce, our Colonies, and our coaling stations would be as free from hostile enterprises as they are in peace-time. Our recent experiences of naval blockade, when the "Warspite," "Severn," and "Iris" escaped from Berehaven, and united at a rendezvous off the Hebrides with the "Rodney" from Lough Swilly, would seem to indicate that the game of naval blockade is likely to be a dangerous and unprofitable one for the blockader, and that the blockading squadron might employ its superior strength to better purpose, and more in consonance with the fighting traditions of the British Navy, by attacking and seizing the enemy's ports and coaling stations, and thus forcing on a decisive naval engagement."

"It will, I trust, be granted that the Navy has its own sphere of action quite apart from the *defence* of ports and coaling stations, and that this duty must rest principally with the land forces."

The "Times" lately remarked that a good deal of the apparent differences on defence questions proceeded from want of clear definitions. In these passages there are two words, "offensive" and "blockade," which are ambiguous, and are differently understood. It has come about that a naval meaning has enveloped the word "offensive." It is now common to hear naval Officers speak of "offensive defence," but they do not thereby mean "attack." They mean advanced defence, and I notice the word applied both to the functions of a squadron watching an enemy in his own port, and "defending" the sea behind it, by making sure that if he comes out he will be followed and fought; and to the functions of local defence vessels, which operate in waters adjacent to a port and are ready to attack an enemy beyond the reach of the batteries.

The word "blockade" I endeavoured to show in my paper on the subject, covered three distinct meanings, namely, "sealing up," "masking," and "observing," and possibly, if Captain Stone has founded his opinions as to the result of the experiments of last year, on what naval Officers have said about blockade, he may have failed to fully apprehend their meaning on account of the varying value of the term "blockade." It is well known that Nelson repudiated the term "blockade" when applied to his long watch of Villeneuve in Toulon, and, whatever differences there may be amongst naval Officers as to the capacity of a blockading squadron to seal another up in its port, there is no rift in the general conviction that the enemy must be watched wherever he is, and followed up, for that the disruption of the Empire is certain if force enough, and of the right kind, be not provided for this purpose.

Probably all that naval Officers are certain about with regard to the escape of the ships named from Bantry and Lough Swilly is, that the blockaders had neither force enough nor of the right kind for the work they had in hand. Judgment is perhaps suspended on the point whether *any* force would be competent to seal up a determined and enterprising enemy.

Captain Stone having, as we see, laid down the functions of fortifications as *freeing the Navy*, incidentally takes up Sir John Adye's position, and imagines one of our fleets being driven into the shelter of a fortified Plymouth by a superior force of the enemy, "there to refit, coal, and await reinforcements." That means, of course, the loss of the command of the Channel; and thus having gradually advanced on the original thought of a sea left open to the enemy, while our Navy makes an attack on his land, he passes imperceptibly to the contemplation of our absolute loss of command at sea as something to be looked for in ordinary course, and as something presumably recoverable by military means.

"The case of Sebastopol," he says, "is even more instructive, affording as it does an actual parallel to cases with which we may ourselves have to deal in the event of an invasion of our territory."

Here, we must observe, that never in any war which might have partaken of the naval character was there such a collapse as the naval force of Russia exhibited. Never in any naval war was there such complete and absolute command of the sea as England then enjoyed. We see, then, how imperceptibly by laying down a certain foundation and building on it, we come to the calm preparation for a state of things impossible before the entire destruction and conquest of what we call the British Empire. Yet I admit that Captain Stone is consequent in his illustrations. It has long seemed to me that if we start with supposing, to use Sir John Adye's forcible and differentiating words, that fixed fortifications are a necessary "complement" of naval force, we must be prepared to admit that total loss of command of the sea is to be regarded as but an incident of naval war.

The conception which Captain Stone has of the Navy carrying the war to the enemy's coast, while leaving an apparently open sea behind it, has so much truth in it that it may be said to be as old as naval



war itself. But two corrections appear to be necessary before we can say that it is wholly true. I cannot stop to give instances, but the rule certainly is that a Navy cannot alone make attacks on the enemy's strongholds. Perhaps, if we take out of the list of attacks the bombardments of Algiers, Acre, and Sweaborg, we shall leave nothing behind but such attacks as have been made by the Army under cover of the Navy. I am sure, when I mention it, that the fact will start up in every mind as a familiar one, but I ought not to leave it without reminding you that the want of troops was the chief thing that paralyzed the French Navy as an attacking force in the Franco-German War.

The other correction is that the Admirals who 300 years ago recommended the policy of attack, never imagined it required fortified bases behind them. Their view was the opposite. Sir William Monson, Elizabeth's youngster and James I's Admiral, in advocating that policy, wrote, "that whilst the Spaniards were employed at home by our yearly Fleets, they never had an opportunity nor leisure either to make an attempt on us or to divert the wars from themselves; by which means we were secured from any attempt of theirs."

The historical case of this active naval policy stands thus: It cannot be undertaken at all until the command of the sea is secured—that is, until it is certain that neither the base nor the communications with the base can be threatened, and that the operations cannot be interfered with from the sea. It must always be abandoned if there is the least chance of the loss of this command of the sea.

Let me just recall that so well has this always been understood that the command of the British seas was the mainspring of all our naval wars, until a time came when it was recognized that we opened the war on the basis that we held the seas. There is positively no explanation of what was done at sea in the Dutch wars but this. It is incomprehensible that the whole naval force of each side should have gathered against the other again and again, and simply fought for the mastery, unless something was to follow it when gained. And what could follow it but the power of attack on territory as well as the control of the water? Neither the Dutch nor ourselves ever got so far in mastery at sea as to contemplate attacks on territory, for we cannot look at De Ruyter's raid of 1667, which could not be put in force until we had disbanded our Navy, as an attack. It was an insult, under cover of a not very creditable quibble. Fortification could not be said to have come into any relations with the moving navies in the Dutch wars. Neither side could attack them for fear of interruption by the other.

When, later, we fell into war with France, there was at first the same thing over again. In 1690 Lord Torrington had a divided force, and found himself off the Isle of Wight in greatly inferior strength to the French. But he perfectly understood the situation. The mere neighbourhood of an inferior naval force which was free to attack was an absolute bar to any operations of the enemy against our shores. "A strength," he wrote to the Council, "that puts me beside the hopes of success if we should fight, and really may not only endanger the

losing of the Fleet but at least the quiet of our country, too; for if we are beaten, they being masters of the sea will be at great liberty of doing many things they dare not attempt whilst we observe them, and are in a possibility of joining Vice-Admiral Killigrew and our ships to the westward."<sup>1</sup>

Here we have the whole argument "in little." No conceivable arrangement of fortifications could have strengthened Torrington's hands; there was no question of fortifications *relieving* his naval force. The French Fleet was there endeavouring to fight the English for the command of those waters, in order subsequently to make territorial attacks; Torrington could not accept battle because, if he were badly beaten, he would cease to operate as the defensive force that he was. The very object the French had in view was to drive him off the sea under territorial shelter, and therefore the provision of such shelter was not a thing to be contemplated by the Admiral. The one great fear, both in the mind of the Admiral and of the Council, was that he might have to retire north to the Gun-fleet, where his observation would be weakened; and the Council forced on the battle of Beachy Head to avoid it.<sup>2</sup> Torrington, however, saw more clearly, and he would not allow the battle to proceed so far as to leave him really beaten. By this action he won the campaign, and the French, failing to get the command of the sea, were obliged to abandon their designs.

The narrow straits in which we found ourselves, had, by the next year, given wisdom to the Council, and Russell, with a large concentrated force, fought the concentrated Navy of France at La Hogue exactly on the principles, and with the objects, of our fights with the Dutch. The French were thoroughly beaten, and ever since have commenced war with us on the understanding that they were to spend most of their time under the shelter of their fortifications, leaving the water territory to us.

Four times since then has France made preparations for an attempt to wrest this command of the sea from us, and to follow it up by territorial attack. In 1744, 1759, 1779, and 1805, fleets were fitted out to dispossess ours of their water territory, and armies were held in readiness to invade so soon as the Channel was clear. In 1744 and 1779 the fleets showed in the Channel, but dared not make good their pretensions. In 1759 the intended Channel commanders were smashed up off their own coasts by Hawke and Boscawen; while in 1805 Villeneuve failed of the nerve which was required to face the enormous risk.

In no case through all these series of operations can we bring our fortifications into relations with our fleets at all in the home waters. On the other hand, there were always the closest relations between the French fleets and the fortifications under which they sheltered themselves. Our Admirals never thought about their bases being fortified, being fully persuaded that they were themselves their defence. And the mere fact that the open anchorages of Cawsand Bay, Torbay,

<sup>1</sup> Entinck's "Naval History," p. 543.

<sup>2</sup> Mr. Laughton tells me that this was due to a discreditablc intrigue of Russell's.

St. Helen's, and the Downs, were their *points d'appui*, accounts for the absence of all expressions of doubt as to the support which might be afforded by the shore.

But I suppose the answer may be that these were the days of sailing ships, and that steam has altered all the conditions. It is right to advance the argument, provided it be followed up, but not otherwise. Experience has taught us certain plain principles of naval war, and a new factor has been introduced. We cannot say that this new factor has voided our experience, though it is proper to say that it *may* have done so, and to examine the possibility.

What is it that steam and electricity have done for naval war? They have everywhere replaced uncertainty and chance, by certainty: they have immensely shortened times, and distances as measured by times.

If, in a general way, the balance of power on a water stage of war was liable in the days of sailing ships to disturbances through the influence of the chapter of accidents; it is far less liable to such disturbances since the days of steam. There has been experience enough to confirm the dictum. Perhaps there never was so smooth and unbroken a naval campaign as ours against Russia. It was steam alone which brought it about. It is on clear record that it was steam alone which enabled the Federal States to adopt that "anaconda" policy to which the South ultimately succumbed. It could only be the conviction of the uselessness of all attempts which caused the Germans to make practically no diversions by sea in the Franco-German War. Certainly in the Chilo-Peruvian War there were cross purposes of the old sort until the "Huascar" was captured. But a naval war between two ships on one side and one ship on the other is hardly of a character to generalize from.

And so we have it that the feature of steam naval war is certainty. If it be true, as undoubtedly it is, that combinations for attack can be more suddenly and with less warning put into action; it is also true that the time which can be allowed for the attack, before it is interrupted, is very much limited, and the limit is very much more sharply and certainly drawn. With regard to fortified places exposed to attack from the sea, the general effect of steam can only have been to add to their strength, not to demand its increase. No one has yet discovered or invented a fortified port capable of maintaining itself for all time against a sea attack. Every such place as yet has fallen when attacked from the sea<sup>1</sup> unless relieved from the sea, provided the attack has been persevered in. And the point is that steam has made relief from the sea more certain and more speedy than it used to be. Relief which was necessary to preserve Gibraltar used to reach that fortress in a month at the earliest. It would now reach it in three or four days. An enemy, with three weeks before him, might very well proceed to the attack of a place, which he could not dream of if he had only three days before him. Suffrein, when he dared the attack on Trincomalee,

<sup>1</sup> Attacked from the sea, that is, as I have said in the earlier part of my paper, by combined naval and military force, the only force capable of making a determined attack.

did so because he thought Hughes was a fortnight distant at Madras. A modern Suffrein could not now attack Trincomalee unless a modern Hughes was no nearer than Suez.

But let us construct and follow up such a case, as is suggested by Captain Stone's postulates of the relations between the fortified base and the squadron which is attacking the enemy's arsenals. Let us suppose that an Admiral is bombarding Brest with ten battle-ships, and that he is enabled to do it because his base, Plymouth, is securely fortified. I must assume that, in the view put forward, there is an unmasked force of the enemy within striking distance of Plymouth, for if there be not, the fortifications can play no part. The condition of the Admiral off Brest is that he requires constant supplies of all kinds from his base; there will be a constant going and coming of store-ships and war-ships, and every now and then an injured ship going home for repair. The Admiral is distinctly told that he has his "own sphere of action quite apart from the *defence*" of Plymouth as a port, but in the middle of his bombardment he receives intelligence that five of the enemy's battle-ships—a part of his unmasked force—are lying a mile or two off Penlee Point, just clear of the Plymouth batteries. What is the Admiral going to do? Can he go on with his bombardment, while all his supplies are liable to be cut off, and his ships, in going and coming, to be destroyed in detail? It may be perfectly true that these enemies cannot long maintain themselves, though why they should not do just as he himself is doing, it is not so easy to see. But I do not think there can be any disagreement amongst us in deciding that our Admiral has no course open to him but to abandon his attack and proceed full speed after the five battle-ships that have been threatening his communications.

Yet, if this be so, the whole theory of fortifications at the base "relieving" the naval force falls to the ground. Plymouth, separated from him, is as bad—to him—as Plymouth destroyed; and the threat of separation governs his conduct in precisely the same way as the threat of destruction does. As far as I can carry my reasoning powers this hypothetical case is conclusive, and it governs the circumstances of every open port which is fortified. There remains no ground for saying that the fortification of a port which it is necessary to keep open will in the slightest degree relieve the naval force.

But suppose Plymouth in this case to have no fortifications at all. What then? I imagine it will be said that the five battle-ships would steam up and destroy the dockyard, and so do a permanent injury instead of a temporary one. If so, the Brest fleet must still come home just as before, and, therefore, there is no effect on the fallacy that the fortifications of the base, or open port, will relieve the naval force. But an inner question arises as to whether the five battle-ships *would* steam up and damage, even if it were entirely unfortified? Naval history, as far as it goes, is conclusive with a negative answer. It tells us that the neighbourhood of a possibly interfering naval force is a complete bar to any attack on the shore whatever.

Though time presses me, I cannot forbear to give some illustrations. One of our earliest entries into the Mediterranean in force was made

by Russell in 1694. The French fleet was then carrying on operations against Barcelona, but the arrival of our fleet at Carthageua was sufficient to cause their entire abandonment, and to force the French to retire to Toulon.

Next year Russell, being engaged in an attack on Palmas, 150 miles from Toulon, abandoned it on news reaching him that the French were in a condition to put to sea from that port. This instance is the more interesting since, at the very same time, we, being unthreatened by sea in the Channel were at our leisure bombarding, and in great part destroying, St. Malo, Granville, Dunkirk, and Calais.

The attempts to re-capture Gibraltar, made by the French in 1704-5, were always frustrated by the appearance of Sir John Leake's squadron from Lisbon. Twice was the attack proceeded with, and twice was it abandoned in fear of Leake's ships.

Thurot's elaborately prepared attack on the east coast of England in 1759 was prevented by the presence of the squadrons of Commodore Boys and Sir Piercy Brett.

In 1782 Suffrein was proceeding to the attack on Negapatam with land forces. The intelligence that Sir E. Hughes was in the vicinity caused the immediate disembarkation of the troops, and abandonment of the design.

Whenever it has been determined to proceed with a territorial attack capable of interruption from the sea, it has been necessary, either to mask the interrupting force, or to employ a fleet of observation as a guard against interference.

Thus, Sir George Rooke could not have attacked Gibraltar had he not been able to do it with no more than twenty-two ships, while thirty-seven formed a guard ready to engage the French if they had appeared.

When De Grasso captured the island of Tobago in 1781, almost under the guns of Rodney at Barbados, he took care not only to employ surprise in the operation, but to have such a covering fleet as made it impossible for Rodney to think of attacking him.

When Suffrein captured Trincomalce in 1782, he believed he was taking pains to assure himself that Sir Edward Hughes' fleet was at least a fortnight distant; but yet the thing was done under guard of a fleet which was capable of fighting a drawn battle with Hughes on the tenth day, the place having fallen on the ninth.

When it was determined to attack St. Malo and other places on the French coast, in 1745, an essential part of the plan was the masking of the French war-ships in Brest by Lord Anson.

In 1761, when Keppel attacked and captured Belleisle, it was a necessary element of success that a strong squadron should mask the ships in Brest.

All these lessons are found in full force as late as the Franco-German War. Then Bouet-Willamez in command of a vastly superior fleet, yet would not risk the simple bombardment of an ill-defended coast town, Kolberg, because of possible interruption at the hands of the inferior German squadron, which was 700 miles distant.

But to make the reasoning complete, we must not omit to note that

two Commanders, and I believe two only, have been found to defy these lessons of experience—the Duke of Medina Sidonia, and Admiral Persano: the former defied the threat of the naval force at Plymouth, the latter of that at Pola. Whether a third Commander will be found to follow in their footsteps is probably questionable.

The fact that a fortified Brest and a fortified Toulon has always preserved the French fleets from our assaults is, of course, conclusive as an argument that the naval Power which has not the command of the sea, may, by means of fortifications, preserve a fleet for a time at any rate. It is a matter of fair reasoning to say that if your fleet is the most precious thing you have, even when it remains in a state of forced inaction, you can preserve it in your harbours by means of local defences of such strength as will send the enemy anywhere and everywhere before he will be driven to make his attack on the fortified ports. But we cannot forget, at the same time, that a householder can make the fastenings of his hall door so strong that the very last thing the burglar will think of will be the forcing of them. But I conceive we have established the fact that before a country can employ such fortifications at all, she must have surrendered the command of the sea, and if such command has been necessary to her empire, she must have abandoned empire.

Let us for one moment push this thought home as in the applied case of one of our fleets being beaten under the shelter of the Plymouth works. When we think of such a thing, we must, in the face of what has been said, suppose that we have no relieving fleet at hand. Were there such a fleet, it is manifest that the victorious enemy would court destruction in pursuing our beaten fleet up an intricate harbour, where it was liable to be caught by the relieving fleet. We do not, in fact, in our thoughts admit the existence of a relieving fleet. There could not be such a thing at Portsmouth, for instance. Yet the theory must be that in some way this command of the sea, which has been lost, can be regained, and be regained out of Plymouth alone. How is the fleet which has been defeated into Plymouth to come victorious out of it? And supposing such a thing possible, how long will it be before this happens, and what will the enemy be doing meantime?

It is a clear historical fact that France never tried to get the command of the Channel unless she had an army ready to make use of that command. Will she not always follow that plan, nay, is this not what we are chiefly told to fear? Would it, in any of those cases I have mentioned, have mattered the least to France whether she had driven our fleets under fortifications, or only up the harbour? Would not either process have equally served her turn? I think that when we thus press things home, we begin to see that there is great reason to doubt the wisdom of spending largely on gigantic defensive works with the idea of our beaten fleets recovering themselves behind them.

I have been considering the case of great naval bases with which it is of imperial necessity that communications should be open, and where severed communications mean loss of command of the sea,

and break up of empire as a certain consequence. These great ports do not really differ in character so far as I can see, though they differ in degree, from what are generally called coaling stations, that is, ports of supply. If we think of Gibraltar, Malta, Aden, Colombo, Singapore, and Hong Kong, we usually regard them as ports of supply for our Eastern traders, as well as for our war-ships engaged in protecting them, and without going at all beyond that thought—perhaps only including the latter branch of it—we have spent, and are spending enormous sums on the local defences of each place. What is it exactly that we are aiming at? What are the conditions we assume to be present when these works shall be brought into play? There seem to me to be but three possible sets of them. First, that the existence of the local defences shall act as such a scare to the enemy that they will never approach. Second, that we have lost the command of the sea, but could regain it if only these places are preserved to us. Third, that though the places should not fall, enterprising raiders might suddenly cut in and destroy the coal and other stores which would be, without local defences, exposed to assaults lasting too short a time to be interfered with unless every defence were on the spot.

Two of these places, Malta and Gibraltar, have had a history, and a third place of like strategical character—Minorca—brings in a history necessary to complete the other two.

The history of Malta is quite simple. France with a local command of the sea, which could not have existed in steam warfare, took possession of the place. The French losing the command of the sea, simply in consequence of the presence of a superior fleet, held on to Malta from September, 1798, for two years till September, 1800. It has never been threatened since, but we have never since lost the command of the Mediterranean Sea. The whole of our operations during our command of the Mediterranean were (unless we except the small use made of Minorca in 1799) conducted with undefended bases, generally open roadsteads.

Minorca, by the joint efforts of the Army and the Fleet, fell into our hands in 1708. It was then a duly fortified place, but we were in command of the sea. It remained in our possession till 1756. Then, as will be remembered, Minorca fell as a consequence of Byng's failure to wrest the command of the sea from the French. Coming back into our hands in 1763, we held it till 1782. From the outbreak of the war with France, in 1778, we had made no attempt to keep the command of the Mediterranean Sea. Our commerce there was of small account, and such as it was, it must have been abandoned, as the full force we maintained was but one 60-, one 50-gun ship, 2 frigates, and a sloop. When Spain declared war in 1779 there was nothing to prevent her bending all her energies to the recapture of Gibraltar and Minorca. Neither was there any relief for Minorca from the sea, and it accordingly fell in February, 1782. But again, we had restored command of the sea in 1798, and Minorca became ours once more, as soon as we desired it, without the loss of a man.

Here then are two places, Malta and Minorca, both for their time

very strong places, yet both following simply the possession of the sea. That the fortifications prolonged the sieges may be admitted, but what must also be allowed is, that these places could only be attacked by the Power which held the command of the sea. In these instances then, it seems we must narrow the functions of fortifications down to preserving the places for a limited time after the sea, and therefore the communications, has been abandoned. We cannot contemplate bringing the fortifications of Malta into actual use until we have abandoned the Mediterranean and our Eastern commercial route.

I venture to think that when great sums go into the works of Malta there is not a distinct recognition that we are preparing to abandon the Mediterranean route to India and the whole of that line of commerce.

The case of Gibraltar is full of instruction. I have already mentioned how it fell into our hands, and how it was kept in our hands in its earlier days, not by the strength of its fortifications, but by the relieving fleet of Sir John Leake, who had his base at Lisbon.

Spain being in 1780, as we have noted, in command of the sea, made a most determined set at Gibraltar as well as at Minorca. I believe we generally consider that the former place was preserved to us by its strength. We are not always reminded that what really preserved it was the employment of the whole available naval power of England in 1780, 1781, and 1782. In each of these years it would have fallen, just as Minorca fell in the last of them, had not immense fleets been dispatched to cover its re-storing and re-victualling. In January, 1780, Sir George Rodney, with fifteen sail of the line, after defeating the Spanish fleet, opened communications with Gibraltar and relieved it. In March, 1781, Admiral Darby sailed for the relief of Gibraltar with no less than twenty-nine sail of the line, near 200 victuallers, store-ships, and others. And connected with this fleet there is the remarkable fact that just about the time that it would have been off Brest, De Grasse was sailing with a great fleet and army for operations against us in the West Indies. Such a coincidence ought to make us extremely cautious in acting on the supposition that fortifications will relieve our fleets. Those of Gibraltar certainly did not in this case. In September, 1782, Lord Howe sailed with thirty-four sail of the line and an immense convoy. The fleet, engaging in a partial action with the Spanish fleet, for the third time prevented Gibraltar from falling into their hands.

We may say, indeed we must say, that but for her fortifications, Gibraltar would not now be in our possession. But we must also say that had it been necessary for us to keep up unbroken communications with Gibraltar, as it now would be on account of our trade, the fortifications would never have been called into action; and had we not for three successive years put out our whole naval strength to relieve it, the fortifications themselves would not have preserved it to us.

Again, we seem to be met by the conviction that fortifications can only represent delay. That they are not of themselves of use to



a moving Navy, as fortresses on land may strengthen the position of a moving Army by covering its flanks, &c., but that wherever communications may be given up, they may enable a place to hold out until relieved.

Some thoughts of a highly paradoxical character will intrude themselves at this point. Gibraltar was a very strong place with a very weak garrison when it fell into the hands of Sir George Rooke. Because it was a strong place it was ever after necessary to put within it a strong garrison. At a time when it was not of the slightest use to us, it exhausted our naval strength in its defence; had it not been a strong place with a great garrison we should simply have evacuated it when it was necessary to abandon the Mediterranean, just as in 1797 we evacuated the island of Elba. We should have done it in the consciousness that it would fall back into our hands as soon as we re-occupied that sea, and the place became of restored value to us.

Considering it to be merely a depôt for the supply of our war-ships, we must note it as an exhausted depôt—the shell of a depôt—unless we kept up communication with it. That is to say, it could not in any way have assisted us to regain the command of the sea, for we must have got the command of the sea before we could restore its value as a depôt. There is, therefore, a certain danger in making a depôt which is necessary to us too strong locally, as, should it fall—as it must if we abandon the command of the surrounding sea long enough—the fact of its strength may retard and hinder the restoration of our command of the sea. Had the Spaniards not originally made Gibraltar strong, we could not have held it when we left that sea, and Spain need not have exhausted herself in fruitless efforts to get it back again as a necessary part of her restored command in those waters.

I am only using Gibraltar as an illustration, not suggesting more with regard to that particular fortress than to say that if our communications with it are necessary, the place must be held by means of these communications and not by its isolated strength, and that the illustration governs all naval depôts—that is, all naval bases which are not producers of naval strength, but only *renewers* of that strength—depôts which in these days of steam are chiefly regarded as stores of locomotive force.

Gibraltar may not be of great importance as a naval depôt. In the wars of the past it certainly only shared the importance which, from the naval point of view, was held by the wholly indefensible bases of Tetuan, Lagos Bay, and Palmas Bay. But were Gibraltar once more in the hands of Spain, the necessities of our case would probably determine that if we were to retain our Mediterranean route to India and the East, we should repossess ourselves of it. It may not be of advantage to the Power whose life depends on a free Eastern highway, but it might be impossible to preserve that highway free if the Power determined to bar it were in possession of Gibraltar.

Reverting now to the three alternative functions which might be assigned to the fortification of Malta, Gibraltar, and other depôts on

a line of communication, we do not seem justified by history in assuming that any fortification will act as a scare to prevent the Power controlling the sea from making his attack. Secondly, we are hardly justified in supposing that if we lost the command of the Eastern route, these depôts being still held by us would materially assist us in regaining it, though, after we had regained command, they would be of the same use to us which they are at present, and this for the simple reason that they would be exhausted depôts when we restored communication with them.

There remains the third function of fortification, namely, the protection of the stores—the protection of the depôt proper, and not the shell of it—from the sudden surprise and destruction which might be effected in a short time by a small force.

I think that the original claim for the local defence of our coaling stations did not go further than this. I think that if the writings of the earliest advocates of this measure are studied, it will be seen that the last thing they had in their minds was that coaling stations should, or could, stand alone. Indeed, I might almost go as far as to say that, in one prominent case, the conception now held by the general body is exactly the reverse of that put forward more than 20 years ago, and still held by him. The idea of preparation for severed communications with a coaling station, which has dominated our actual policy with regard to them, was totally absent then. The defence suggested was a local sea defence which would prevent communications being cut by anything short of a considerable force, for it was plainly felt that a depôt must cease to be a depôt, and must lose the whole of its value, if the stream of replenishment ceases to flow into it.

Think of Singapore for a moment, simply as a naval base. Our squadron comes in, exhausts the coal supply, and quits. The enemy closes round, seizes the colliers which would have replenished the exhausted stores, fills up his own bunkers from them, and either destroys the rest, or dispatches it to some convenient hiding-place. Our own squadron comes back, drives off the enemy, and finds an empty coal depôt. So far as our war-ships are concerned, what difference does it make whether Singapore has altogether fallen or whether only the coal store is empty? Our squadron there is powerless, while the enemy is left in possession of the sea. The fortifications have absolutely failed to hold any relations with the moving Navy. They have not guarded its stores, and they cannot in any way assist it to recover the command of the sea.

If, on the other hand, a coal store is very much exposed, the strongest works may be passed by, and an enterprising enemy on a dark night, with good store of dynamite and combustibles, but with very little force, might in an hour or so destroy all the value which the works had been erected to guard.

I think what took place with regard to Port Hamilton gives us a most useful measure of the real naval thought with regard to the fixed defences of a purely naval depôt. Superficially we should read it that the Navy rejected Port Hamilton as a depôt unless it had been heavily fortified and garrisoned, but would have been glad to hold it

otherwise. And, still superficially, it would appear that the sole objection to the unfortified depôt would have been the necessity of detaching ships, really required elsewhere, for its local guard.

But the moment we go below the surface we find the governing thought of a different character. Port Hamilton, if valuable as a naval base at all, would have been chiefly so for operations against the Russian Siberian ports, such as Vladivostock, in the event of war. But the naval instincts, resting on all the broad facts of naval history, declared that such operations required a preliminary command of the sea. That if such command existed, undefended naval bases would be established as close as possible to the scene of action, and Port Hamilton would, in consequence, fail to be of any value.

The general conclusion arising seems to be that no moving Navy has ever really laid a stress upon *fortified* bases. When it is in command of the sea it will always seize and hold convenient bases, but it will rarely, if ever, of itself, spend much on the local defence of the bases. Their defence is involved in the command of the sea. A moving Navy must either be in command of the sea, or fighting for it. It holds its command by the same tenure as an army does, and as two armies cannot command the same territory, so neither can two fleets. If in a given territory, the army of one belligerent cannot attack the fortress of the other while the army of the other is besieging another fortress of the first; so neither can these things happen on the water.

Fortifications will shelter beaten, and, therefore, inactive fleets, just as they will shelter beaten armies. Plymouth and Portsmouth might become to our Empire and our fleets, what Metz and Paris were to the French Empire and armies—mere receptacles for shutting up force in, while the Empire was being over-run. I do not think that had we, thirty years ago, regarded them from this point of view, we should have spent as much on their local defences as we have done.

As regards commercial ports and out-ports, whether naval bases or not, I take it as plain that every nerve must be strained to secure our communications with them in war, and that it is extremely difficult to defend the expenditure of any money on local defence until the communications are absolutely secure. When the communications are secure, the provision of local defence on the supposition that they are not secure, becomes somewhat anomalous.

But, on the other hand, outlying property of very great value left very much exposed, is a direct temptation to the attack of it. A Malta dockyard without any defence at all, and capable of being got at and destroyed in a few hours by a couple of dashing cruisers, would be such a temptation; as we might presuppose that our communications would not always be so close as to make it absolutely certain that there might not be half-a-dozen hours when no opposing cruiser of ours would be either in port or in sight.

That is one way of looking at it. But when we are dissatisfied with a Malta dockyard which we admit is a temptation only to a great battle fleet and a heavy land force, and when we propose to spend heavily on the works protecting it, rather than on maintaining communication with it, then we are, I think, looking not at the preserva-

tion of our Empire, but at its disruption. We must be contemplating the abandonment of our route to India *via* the Mediterranean for some indefinite time, and we must be contemplating either the ultimate loss of Malta, or the exertion of the whole of our naval power at intervals for its relief and retention, all at a time when we cannot make the slightest use of it, and are, by the hypothesis, desperately pressed elsewhere.

I should observe that all the steam wars confirm the teaching of the sailing wars, respecting fortifications. They have never stood a determined attack from the sea; they have never given, or restored the command of the sea; but they have sheltered beaten and inferior fleets, small and large, just as they did in times gone by.

But, on the other hand, Bouet-Willanmez carried on his naval war in 1870 from the wholly undefended bases of Langeland and Kioje Bay, even as we had, 15 years before, carried on ours from the undefended dōpôt of Nargen, and as Nelson had, 70 years before, carried it on from the anchorage of Madalena.

As I said at the opening of my paper, I did not think we could do more with so difficult a question as this, than suggest ways of looking at it. It will be apparent that my way of looking at it tends to put very great restrictions on the extension of fixed works and of local defences of any kind. I have endeavoured to look at the matter all round, and wherever I formed an opposite view, to endeavour to press it home to its consequences and see what they came to. I have not adverted much to the local defence of purely commercial ports, because I cannot shake myself clear of the conviction that it is the communications alone of these that are worth defending, and that while the ports are nothing without them, the defence of them includes, inexorably, the defence of the port itself. It is a mere instinct with me which admits light batteries at the entrances of such ports. I cannot, when I face it, reconcile their existence to my reason.

**General ERSKINE:** In rising to open the discussion on the very important and able paper to which we have just listened, I shall not attempt to enter into any lengthened criticism of details, but would prefer to confine the few remarks that I have to make to the general line of argument which seems to pervade the paper as well as many recent writings and utterances on the same subject. That line of argument might be, perhaps I might say boldly stated in somewhat the following way:—The construction of fortifications for the protection of our naval arsenals, and the organization of land forces for the defence of the coasts of the United Kingdom, are unnecessary. For in the event of our being engaged in war with any European Power or a combination of Powers, one or other of two things would happen: either our fleets would hold the command of the sea or they would fail to do so. In the first case, that is to say, if our fleets hold the command of the sea, an invasion of the United Kingdom would not take place, as the enemy would not dare to attempt it (we shall nearly all of us agree to that I think); and in the second case, that is to say, if our fleets had lost the command of the sea, an invasion would not take place, because the enemy would not trouble himself to land a force upon our shores inasmuch as he could bring us to submission through the instrumentality of starvation. Now, I would ask what is the logical conclusion from these statements? Is it not that we have in past times squandered many millions and organized large forces for the purpose of preventing an invasion which could never take place? And further, now that we have been brought to our senses, ought we not to dismantle our fortresses and to disband those of our land forces which are only required for home

defence? I think if such a proposal were made to the public it would rather startle them. But why should it do so if the proposal be founded on sound reason? The only answer that I can conceive would be that the public are not prepared to assent to the idea, that even if our fleet were disabled it would be possible to institute a complete blockade of the United Kingdom so as to prevent the ingress of the vessels which would be necessary to bring in our food supply. Of course even a partial blockade under the circumstances I have mentioned would be a most calamitous event: it would entail misery almost beyond description on many parts of our population; in fact, the mere thought of such an event awakens very disagreeable feelings; but as to its being the means of inducing us to at once throw up the sponge, I think that the public is not prepared to accept such a view. If a partial blockade—I am presuming that a complete blockade is not possible—would fail to bring about such a result as I have just mentioned, I think the enemy, having command of the sea, would be very much inclined to attempt an invasion, and then we should find that we had done well if we had preserved the fortifications of our naval arsenals and the land forces on which we relied for the defence of our coasts. Those forces, if properly organized, could keep the enemy at bay at all events for a sufficiently long time to enable our squadrons to refit, but of course that would not be possible unless our naval arsenals had been kept intact all the time, and that can only be done by fortifications erected for their defence. I think, in speaking of this subject, we should not leave out of sight that it is not in accordance with the spirit of this nation, that the fact of our fleets having been worsted in the outset of a war would lead us immediately to succumb to circumstances; on the contrary, as we are pretty well aware that war is a very uncertain game, whether it be waged on land or at sea, we should be inclined to hold out till the last, and should be very glad to have for that purpose the land defences which the country has up to the present maintained in a more or less proper state of efficiency. It is not safe, I know, to utter prophecies, but I venture to predict on the present occasion that the conclusion of this discussion on which we are now entering will be somewhat to this effect—that the naval forces of this country should, in the first instance, be attended to; that they should be kept up in a state of strength and efficiency which would ensure, as far as poor mortals can control the future, our supremacy at sea; but that at the same time it would be unwise to dispense with the fortifications of our naval arsenals and with the land forces which we have now at our disposal for the defence of our coasts.

General Sir LOTHIAN NICHOLSON, K.C.B., Inspector-General of Fortifications: I must first be allowed to pay my tribute of praise to the lecturer for the extremely skilful way in which he has handled the subject. When a man of Admiral Colomb's calibre stands up and delivers lectures of this sort it is quite certain that he will be not only attended to, but he will to a great extent rule public opinion. I do not propose to follow Admiral Colomb through all the different arguments that he has used. I may shortly say that I do not agree with them nor do I think them logical. I think, in fact, that Admiral Colomb has achieved the *reductio ad absurdum*. Now, I do not propose, as I have said, to pull to pieces Admiral Colomb's lecture; my object will be more to address myself to the policy of the lecture. It is given at a critical time. At the present moment the nation is alive to the wants of its defences, and amongst naval and military men there is a consensus of opinion that what is wanted is the strengthening of the Navy. I cannot but think that this meeting will agree with me in feeling that unless the naval defences of England are secure, there is danger to our hearts and homes. But let us look at the history of these things. We have been treating the combined defences of the Army and Navy as one. For long years ignorance predominated. Time was when I joined the Service, that the naval man or the artilleryman was never asked his opinion upon the defence of this country; it was left to the engineer, and he carried it out according to his lights. Compare that with what it is now. The engineer carries out more or less the views of those men with whom he is associated. The artilleryman and the naval man are consulted as to what is requisite for fortifications; that is the condition of things at the present time. I agree with Admiral Colomb that if the Treasury list is only open to one Service that Service must be the Navy; and I for one should most unquestionably vote that the Navy should be the one to be strengthened. But I cannot

believe that we have fallen so low that the Navy alone can be strengthened and that the Army and the defences of this country are to be starved. Now, gentlemen, what is the logical conclusion of this lecture? It appears to me to be this: that we, military and civilians alike, are to stand on the shores of our land and watch the Navy fighting the enemy, to twiddle our thumbs in anxiety that the Navy may be victorious, because, unless it is, there is nothing behind. The gallant Admiral has practically told you that land defences are of no use, and therefore it appears to me that as General Erskine has said, the best thing would be to disarm the forts and disband our Army. Now, I do not think that the country would ever listen to such a conclusion as that. In a few words I should like to say what my own view is. At the present time the defence of the Kingdom has divided itself into two parts—one is naval supremacy, the other is the protection of certain ports and certain coaling stations at the most important parts of the Empire. With the first, I, as a soldier, do not presume to interfere; the naval man alone can give an opinion upon what the naval supremacy of England should be, and, therefore, it would hardly be becoming in a military man to give an opinion upon a subject of that sort. But with regard to the second, the necessity for defending certain garrisons, and certain coaling stations, for thirty years have we been about this work: for thirty years have the best intellects of the Army and the Navy been directed towards this one point; for thirty years have Commissions sat, and I am happy to see that Lord Carnarvon is here to join, I hope, in this discussion: for thirty years has there been a Committee sitting at the Horse Guards to consider this question of defence, and upon every one of those Committees has the Navy been amply represented, and there has been a consensus of opinion as to what these defences should be. Now I ask you, is it wise to interfere at such a critical time as this with a movement which I myself believe is going forward to a very successful issue? I do not wish, as I have said, to criticize the different points in Admiral Colomb's speech. I have no doubt that there will be found plenty of people who will be able to take up and criticize the different parts of it, I have no doubt that there are some people who will be found to emphasize the objections which he has raised to the present condition of things. I myself, regarding the higher policy, should view with great regret that it should go forth to the public that there are many people in this assembly who have advocated in strong terms the views which the gallant Admiral holds. I might say here that the press is the chief organ for the dissemination of the opinions which are ventilated in this assembly, but what happens? The "Times" and other papers will publish the whole of Admiral Colomb's speech, but in short paragraphs will only be recounted the objections of those people who may raise perfectly valid objections to parts of what he has said. Thus the public hear one view of the case, they do not hear the other. In that, I consider, is a very great element of danger. There are one or two points, however, that I should like to remark upon. The gallant Admiral has quoted history, he has brought forward instances one after another to prove his case, but it appears to me that the traditions of old times are very little guide to what must take place in the days to come; I say that there is almost as much difference between the vessels of the Crimean War and the ironclad of to-day as between the triremes of the Romans and the old sailing vessels of the days gone by; I say that when the naval man of old wars left his harbour, all he had to think about was that he might be safe from a lee-shore, and keep the weather gauge of his enemy; all he cared about was to make the best way he could after his enemy, and to fight him and to sink him if he could. But what is the case now? The case now is that every sailor who leaves his port must calculate upon the coal supply that he has in his bunkers. He cannot make after his enemy in the same way that they did in old days, but he must calculate the amount of coal which he will have in his bunkers when he meets his foe. Does that not alter the position of things? I think it makes all the difference in the world. Admiral Colomb has, I think, rather exaggerated the statement made by General Schaw in this room: he stated that there was 833,000*l.* required for the completion of the defences of Plymouth. Admiral Colomb has forgotten the fact that that sum comprised fortifications it is true, but it also included that which is infinitely more expensive—the armaments and the ammunition—the armaments, which is as necessary for the fleets as it is for the land defences. I must deprecate in the strongest terms at my disposal the setting forth of the pretensions

of one Service to the detriment of another, We naval and military men are addressing ourselves to one object. We do not wish to contend for the benefit of the one to the detriment of the other. We are only doing that which we believe the country requires of us; we are only trying to carry out to a successful issue all that the safety of our common nation requires, and, I think, for that reason we must do what we can to hide from the public any differences if we have them; but should we unfortunately have them, let us try by all means to meet each other on common ground; let us try to come together and co-operate as much as we possibly can for our common country's good.

The Right Hon. the EARL OF CARNARVON: Sir Frederick Stephenson and gentlemen, you are very good to call upon me to contribute what little I can say to this most interesting discussion, though, as a civilian, I naturally feel great diffidence in addressing an audience which I know is so largely composed of professional experts and men so well calculated to express a public opinion on such a subject. I had, however, the advantage, Sir, of being connected for some years with a Commission which was authorized to inquire into our defences abroad. It led me to look very closely into these questions, and I am bound to say that the opinion that I then formed does not concur with the views which the gallant Admiral has set forth with so much ability this evening. I will not of course enter upon what is really the larger half of this question, the defences of our arsenals and our own commercial ports. I am afraid I must dispose of the one by saying that they are only very partially armed, and of the second that they are absolutely defenceless at present. I would rather in the few observations which I would make speak of those foreign stations with which I myself and the very able Commission which acted with me were empowered to deal. I apprehend, putting it in perfectly civilian and untechnical fashion, the defence of the Empire consists really of two things,—the defence of our home shores on the one hand and the defence of our commerce afloat on the other, for our commerce is our life and being; and if it be destroyed our credit and resources perish with it. I fully subscribe to the doctrine which has been laid down here to-night, and elsewhere, that our first line of defence is the Navy: and more than that, I think we have been living in a state of—I hardly like to use the words that were on my lips, but I will say we have lived for some years in a fool's paradise, trading on our past reputation and utterly deficient in the necessary means of self-protection. With regard to the necessary amount and character of our naval defences, I will only say that the Commission of which I had the honour to be the Chairman, having to examine incidentally and collaterally into that subject, came to a distinct and decided opinion on the subject, and represented to the Government of the day, and consequently to their successors, that in our opinion the naval defences of the country were inadequate for the purpose, and I need not say how grave such a statement was. But I pass to a second branch of this question, the protection of our commerce afloat. Now, Sir, the view of the Commission was this: that inasmuch as there were great lines of English commerce of incalculable value, to be registered not by hundreds and thousands, but perhaps by millions of pounds in value, that it was of inestimable importance that we should hold the commanding points along those great sea routes. By some strange accident of fortune the principal of those governing points have fallen into the hands of this country, and it seems to me to be almost madness not to take the full advantage of them. And let me observe that when persons talk of the vast expense to which this leads us, I would observe this is very exaggerated language. The expense of defending these coaling stations is really of the most moderate description: and looking to the object which is in view it bears no kind of proportion to it. The estimate which the Commission made of the expense represents in round numbers not very much more than the cost of two large ships of war of the present day. I leave it therefore to the common sense of such an audience as this, whether it is reasonable to shrink from such an outlay, the absence of which may mean the loss of the best part of our commerce afloat. Now, Sir, what is it that makes these coaling stations and foreign defences so valuable? I apprehend, speaking roughly, generally you might classify them pretty much under these heads. First, it is intended by these coaling stations that they should set the Queen's fleet in these distant parts of the

world free to operate as naval policy may direct. Secondly, after an action they enable our fleets under the security of the guns of those defended stations to refit and to repair. Has anybody ever considered what the expense, difficulty, impossibility, would be of sending home from an enormous distance some of our large men-of-war in order to repair and to refit? Thirdly, it would enable the Queen's ships not only to refit and repair but to coal, and, as Sir Lothian Nicholson very truly said, coal under present conditions has become the very life of a ship; she cannot move without it, she is absolutely dependent upon it, and further, every one knows well that whereas our first-class commercial ships can carry and do carry a very large amount of coal, the Queen's ships can carry but a very limited quantity. But further, just in the same way these coaling stations afford shelter to our commercial navy, when chased by privateers or pursued by enemies, they take refuge under the guns of those forts. In the same way, too, they are enabled to coal, and if this defence be not given to them, it is almost certain that either two-thirds of the commercial marine must be laid up on the outbreak of war, inasmuch as they would not be adequate in point of speed to escape the fast cruisers of our enemies, or, on the other hand, we should see two-thirds of them transferred to a foreign flag. It must be borne in mind that in all probability the days of conveying a merchant fleet are passed. Lastly, we must not forget that defended stations have the tendency at all events greatly to deter an enemy's cruisers. A foreign ship of war will, I apprehend, think twice and thrice before she attempts to force a reasonably armed defended station. She would run the risk of injury to herself; the certain risk of a vast expenditure of her coal, and lastly the risk of an expenditure of her ammunition, and all this at a distance from her own base. On all these grounds the Commission with which I was connected thought that these coaling stations offered very great advantages both to the Queen's Navy and also to our commercial marine. But I must take the liberty of saying this, that if these forts are not reasonably equipped and defended it would be better that we should not touch them at all. On that I entertain a very clear opinion. You need for these positions not merely forts, but you need the guns to put into those forts, and you need trained gunners and garrisons to defend them: and if you are not prepared to go to that amount of preparation it is better that you should not waste time and money upon a fruitless and perhaps mischievous object. And yet as a matter of fact that I am afraid is really the present position of things. We have a considerable number of these stations in which we have gone to great expense, sometimes ourselves, sometimes by inducing the Colonial and local authorities to undertake the work for us—we have erected fortifications at a large outlay, but in the vast majority of cases we have either only guns of a very small calibre, or no guns at all; and in one case I have repeatedly protested—I have exhausted myself in protesting against the impolicy—I should say the insanity—of leaving such a vital point as the Cape of Good Hope for years and years undefended. When our Commission, to which I have already alluded, was appointed in 1879, the first question that came before us was the defence of the Cape. We went into the question, knowing its vast importance as an imperial station, we postponed every other question to press this one question upon the consideration of the Government. We did so press it: we reported immediately and fully on it, and I can truly say, I, myself, have never lost an opportunity, both in public and private, of urging it upon successive Governments; and yet at this moment, though the forts are built or building, there is practically no armament whatever in them. I do not say there is special blame to any particular Government. The blame must be widespread. The country is to blame by its apathy and indifference to dangers which, because they are not immediately visible, are disregarded; but now that the question has come before the country, I hold it to be the bounden duty of all those who can by voice or vote bring pressure to bear to use that influence to the uttermost for the common good. And now may I, in conclusion, say this, that whilst admiring the ability with which the paper which the gallant Admiral has read to-day has been drawn up, I cannot subscribe to it? I think that the gallant Admiral has attempted to prove too much. I fully admit with him that the Navy is the first line. I wish to see that Navy strengthened, and I trust to see that this new session of Parliament will not pass without a very considerable increase; but on the other hand, if our coaling stations and ports, both at



home and abroad, are not to be placed in a state of defence, then I hold that the gallant Admiral asked us to go into, not a large, but an enormous, an overwhelming expenditure for naval purposes. The absence of defended ports means a naval increase to which it seems to me difficult to set any limit. I think we are in danger at the present moment of what I may call a *see-saw of opinion*. We have on the one side a very able body of men who represent to us, as I believe most truly, that the Navy requires a large increase—probably there may be a tendency to carry that view a little too far, but on this I do not now argue: on the other hand, we have a body of able men who warn us of the risks of invasion, and who actually desire to surround this vast metropolis with fortifications. Sir, as a mere civilian who by your favour this afternoon am allowed to address a professional audience, I must honestly say that I believe the truth lies somewhere in a mean between the two conflicting views. I believe there is great necessity for an increase of the Navy. I believe also in reasonable defence which ought to be given to our coaling stations and home ports, and this without the loss of an hour. I hope and believe that we shall see a real and effective step made this year. We shall be probably asked for a considerable sum, but it is not only the expenditure of money that will secure the object that we have in view, but that such an expenditure should be governed by large and wise and statesmanlike considerations.

Captain STONE, R.A.: Sir Frederick Stephenson and gentlemen, it is with considerable reluctance that I obtrude myself upon your forbearance upon this occasion, but since the gallant and distinguished lecturer has honoured me by passing in review a large portion of the paper which I was lately permitted to read in this Institution, there is no choice left to me in the matter unless I wished to appear discourteous to the lecturer himself or indifferent to the issues which have been raised. The lecturer says that he detects "three incompatible lines being pursued:" with the first of these I have little sympathy; the third, alluded to as the line sketched out by myself, is not quite a correct interpretation of my views. I do not advocate "the dispersal of the Army all over the world in detached garrisons," but that naval bases of operations and coaling stations should be rendered as far as possible impregnable against a *coup de main* on the part of the enemy's fleet, and, moreover, I agreed with Lord Charles Beresford's suggestion that coaling stations should be garrisoned by marines, unless there was some reason for maintaining a military force in the locality; now I venture to think that this line of policy is not merely quite compatible with what the lecturer calls Colonel Maurice's line, but that it is an inseparable and essential portion of it. With regard to the contention that "there is nothing between a light battery and a first-class fortress," I am somewhat surprised to hear such an argument advanced in the present day, and venture to think that the "naval friend" to whom the lecturer alludes must have made the remark some few years ago in reference to the past history of fortification; if those who are responsible for our defensive works and armaments were to rely upon historical precedents to the same extent that the lecturer does, the point of the remark alluded to would be more apparent. My own contention throughout my lecture was that the accuracy of modern artillery fire and the introduction of high explosives in shells must bring into strong relief the weak points of iron and masonry permanent works and the advantages to be gained by an extended use of earthworks, since the latter are practically not more affected by the explosion of a shell containing "Lyddite" than if it were merely filled with gunpowder, whereas the terrific effect of a high explosive shell against masonry or iron is now well known, and I quoted an experiment at Port Lobos. Sir Lochian Nicholson further informed the meeting that the foregoing facts were borne in mind in the construction of all new defensive works, and that a great deal of what I had said on the subject had actually been anticipated. Again, my advocacy of light and medium quick-firing guns in earthen batteries, as opposed to any further increase in the heavy armament in protected batteries, can scarcely be said to range me with those who pin their faith on extravagant armaments. I cannot help thinking that the lecturer is stirring the embers of a bygone controversy to no useful purpose, inasmuch as the system of fortification which he deprecates has been publicly acknowledged by responsible Officers to be a thing of the past. I do not think the argument that "as we propose a naval increase, we should logically propose a fortification decrease," is quite sound, any more than I

think that the raising of a mounted infantry regiment should entail the cutting down of a regiment of cavalry, and I trust the lecturer will forgive me if I say that the impartial discussion of any question of national defence between Officers of the Army and Navy is not likely to be forwarded by impressing upon them at the outset that they are "rivals for the open palm of the Chancellor of the Exchequer." How can the Government or the country have any confidence in the recommendation of naval and military Officers, if they are led to believe that each Service looks upon the other as a rival instead of an ally, and regards the question of national defence as a scramble, in which each is to see how much he can "carry away from the till of the Chancellor of the Exchequer?" The gallant Admiral constantly makes use of the expression "the command of the sea," and admits the value of fortified coaling stations, harbours, &c., to the navy which has lost "the command of the sea." I would suggest that now-a-days "the command of the sea" is rather a large order, and that to speak of 100,000,000 square miles of navigable waters, studded with possessions of more or less value to the British Empire, as though they could be commanded with the same facility as an important trade route or a prescribed area of territorial waters, is somewhat liable to mislead; it is quite conceivable that we might temporarily lose the command of certain waters while we retained the command of others, and surely the lecturer will allow me to believe that the defensibility of our dockyards, harbours, and coaling stations, in such a case, would be of the greatest value in "relieving" the Navy. Referring now to the sketch of Singapore which culminated in the question—"So far as our war-ships are concerned, what difference does it make whether Singapore has altogether fallen or whether only the coal store is empty?" . . . "the fortifications have absolutely failed to hold any relations with the moving navy. They have not guarded its stores, and they cannot in any way assist it to recover the command of the sea." The lecturer forgets that one of our squadrons is supposed to have drawn its supply of coal already, and that if Singapore were not fortified, even this one supply could have been captured by a single fast cruiser before our squadron appeared on the scene; moreover, there is no reason why the coal store should be found empty on the return of our squadron, unless a very insufficient supply had been stored there in peacetime, or unless, owing to the incapacity of the place to defend itself, it had fallen an easy prey to the enemy's cruisers. Besides, our war-ships are not the only things to be considered, and it would make a very considerable difference to our merchant fleet, and to those at home who were depending on the supplies carried by that fleet, if it were possible for an enemy's cruisers to sink or capture the shipping in the harbour without a single gun being fired in self-defence from shore batteries. I hope the lecturer will pardon me if I say that he has unintentionally misrepresented me with regard to the Navy *alone* making attacks on an enemy's strongholds; I distinctly said that each Service required the co-operation of the other, both in attack and defence; moreover, if there is an Officer of the Royal Marines present, he may be able to inform us that the naval authorities could, indeed, undertake attacks within certain limits, without any aid from the military authorities; there is, therefore, no occasion for Admiral Colomb to make any correction on this score, as I am in perfect accord with him. With reference to the second correction, I am absolutely at issue with him, inasmuch as I think the historical precedents of 300 years ago are of no more value to the Navy than they are to the Army from a *scientific* point of view; conditions have changed since those days, and we must perforce accommodate our military and naval policy to those changed conditions; naval strategy is now dependent upon coal supply and the smooth working of complicated machinery; the first object of an enterprising enemy will, therefore, be to seize our coal supplies and take possession of such places as are adapted by reason of harbours and dockyards for repairs and refitting of machinery, &c.: the possession of such points cannot fail to exercise a decisive influence upon all future naval warfare, and we have absolutely no precedent of two or more first-class maritime Powers being engaged in naval operations under modern conditions upon a scale which would in the smallest degree foreshadow the course of events in the future. The historical method of argument is seductive, but it is full of pitfalls, and the time is now ripe in naval matters to create precedents instead of following them, always excepting the good old precedent of never hauling down our colours and not knowing when

we are beaten. The lecturer lays much stress on the difficulty of supplying a besieged naval fortress with food and munitions of war, but he ignores the fact that the blockading fleet not only requires a larger supply of the same necessaries, but also a constant supply of coal to enable it to keep the sea. What we have to fear is not a prolonged naval siege, but a sudden attack at any given point by an enemy who is in temporary command of certain waters; I cannot believe that many naval Officers will be found to endorse the lecturer's opinion that as our Navy is increased, so should our *fortified* coaling stations and dockyards be decreased, and that the formation during active operations of "*unfortified* depôts of supply and undefended naval bases as close as possible to the scene of action" can ever be a reasonable or efficient substitute for fortified coaling stations, harbours, and dockyards all over the world, capable of self-defence, and able to afford assistance to the Navy in time of need, whether it be for repairs to machinery, to make good damages sustained in action, or to renew the coal supply. I must apologize to you, Sir, and to the meeting, for occupying so much valuable time, and crave pardon from Admiral Colomb if in my somewhat humble military position I have been indiscreet in taking too warm an interest in the affairs of the sister Service.

Captain P. FITZGERALD: It is impossible in the short time at our disposal to criticize adequately this very able paper. Admiral Colomb told us that he was going to take the position of a special pleader in the case, and in a letter which he addressed to the "Times," a short time ago, he said he was going to take the position of the "devil's advocate." I rather think he has done so. I regret that he should have taken that position, and that he should—if I may say so without any offence—have exaggerated or overrated his case, because it is a case that does not require overstating; the facts are so clear and palpable that a simple statement of the relative importance of naval and military defence for this Empire is sufficiently obvious, if set forth plainly without attempting to bring it to the point of *reductio ad absurdum*, as Sir Lothian Nicholson has said; no doubt Admiral Colomb's desire is to raise a friendly discussion between Officers of the Army and Navy as to the respective merits of their modes of defence, and it is only to be supposed that each side should take the line of "nothing like leather." But it seems to me that the case is so absolutely clear that the defence of the Empire is so absolutely dependent upon the Navy that the other side are "not in it," to use a sporting expression. I do not wish to say anything in the least offensive to the soldiers, but they are "not in the hunt" at all in the matter. I am quite sure they would not accept the rôle of standing still to fire guns from behind an impenetrable fortress. They will have their rôle in the defence of the Empire in defending India, where they will have their work cut out, but they have nothing to do with the defence of this United Kingdom, because, once it comes to fighting on these shores, if once a volunteer fires a shot in anger, all I can say is, it will be "all up," he might as well fire blank, every bit. ("Why?") Because you will be starved. ("Explain.") I will explain in one minute. I have said I thought Admiral Colomb overstated his case, and I am bound to give you some instances. I think when he pointed out the case of Plymouth, where the ships were supposed to be led away, or to go and attack Brest, and were to be cut off from their base by the enemy, he said it would be all the same to the Admiral whether Plymouth was taken altogether or whether the communications were cut. It would be all the same for that Admiral and for that particular enterprise, but it would not be all the same to the country. It would stop the particular enterprise in hand, but there would be a vast difference in the general effect on the country. And then when he goes on to point out that fortified places have always fallen when they have been steadily attacked from the sea, he forgets there are many places which have never been attacked because they were supposed to be impregnable. If it was a rule that a fortified place should be attacked from the sea and taken, why was not Cronstadt taken, or why did the naval attack fail at Sebastopol? Sebastopol was taken afterwards, it is true, but it was from the land. Also with regard to Singapore, I think he overstated his case, and Captain Stone has touched upon that very ably. Admiral Colomb assumes that one swoop is to take away all the coal and leave an empty store for the next comer. Singapore unfortified would be a supply to the enemy; fortified it would be able to resist attacks of light ships, at any rate, and to replenish our own ships when they came

there. That is all, I think, I have to say in opposition to Admiral Colomb. I think Lord Carnarvon rather missed the point when he talked about a fleet refitting under the guns of Singapore. That assumes that they are defeated. I am quite with Admiral Colomb there. They can refit in an open harbour unless defeated, but if they are defeated they get under the guns, but that means that they have lost the local command of the sea, and that all communications would be cut off. I think that these technical discussions only lead up to the main point, which seems to me to be this, that the main arteries of trade and commerce for this country are all over the world. These arteries contain the life's blood which is essential to the existence of the Empire. I won't confine myself to food. It is not a question of food only, it is also a question of raw material. There is no use in your saying, as Mr. Wilson said in a speech the other day, "I will convey food into the country; it is impossible that they can blockade us." True; but at what price, and who is going to pay for it? What is the use of bringing food in at famine prices? Are we not aware that there are 37 millions of people in these islands, and a large proportion of these, though not now at starvation point, certainly would be if you doubled the price of bread. Therefore, you are bound to be brought to your knees at once if your communications and your raw material are cut off. It is no use bringing in food if the people cannot buy it, and you are, therefore, absolutely dependent upon raw material for manufacture. Therefore, the whole question hinges itself on these arteries of commerce. If you cut a man's arteries it is a mere work of supererogation to knock his brains out, because you would have already killed him, and that is all you want to do. I daresay you all remember the concluding words of that very able digest by the Committee on the Naval Manœuvres, where, after summing up the whole case, it is said, "By her Navy she must stand or fall." In conclusion, I would venture to read you a short quotation from the "Times," in a leading article of the 3rd of January. The "Times" makes this statement, and I should like to hear this controverted if possible: "If the Navy is made thoroughly competent for its work, no other defence for these islands or for the Empire at large will ever be called into play. If the Navy fails us, no other defence will avail to avert crushing disaster." There is a plain statement, and if that can be controverted by our friends the soldiers, let it be done.

Colonel MATRICE, R.A.: The very kind reference which Admiral Colomb has made to me in the early part of his paper challenges me to say exactly how far I think we ought to expend our Army in these fortresses and coaling stations so as to lose the force which we might elsewhere employ. Now, first of all, I particularly thank Admiral Colomb for having drawn attention to that aspect of the subject, that is to say, the use of our Army in co-operation with the Navy for certain European purposes, because it seemed to me a little strange to hear a statesman to whom we owe so much in these matters as Lord Carnarvon sum up the great subject of our defence by saying that it consisted in the protection of our shores and our commerce. I think there is an omitted third clause there of great importance, and that is the protection of our great Eastern Empire and our Colonial possessions. Now my purpose, if my friend Captain Fitzgerald will allow me to be "in it at all," speaking purely as a soldier, without attempting to intrude into any question of naval strategy or tactics, has been, in the statements to which Admiral Colomb alluded, to give what is not my opinion only, but what is the absolute judgment of the statesmen of the Continent to my certain knowledge, that the Navy can, by rendering such assistance as is in its power to the armies of possible allies, and by transporting an army and enabling it to strike at certain places, not directly, but indirectly carry out that third part of the programme, and ensure the safety of India and the Colonies. It seems to me that it is vital to us that that third point, the value of the Navy and of our transporting power for the defence of India and the Colonies, should be recognized. I, at least, may claim not to have been calling out that there is nothing like leather, because in everything that I have been saying on these subjects I have been crying out for the strengthening of the Navy; and I have gone further than that, because, although I am well aware that what is most necessary in order to bring our volunteers and our home army into the condition of an effective army in the field is an increase of my own arm, the field artillery, I have

still maintained that that increase should not be made until the Navy has first had its proper share of attention; I may say it was from Admiral Colomb, and from his brother in earlier years, and from my friend the late Colonel Home, who always showed the most eager anxiety in supporting the Navy in all these matters, that I was first brought to pay attention to these great questions of the coaling stations and our lines of commerce. As it happens, I was the Secretary of the Committee whose duty it especially was to determine the garrisons which should be assigned to those coaling stations, and I can assure Admiral Colomb pretty definitely, without touching upon any matters of confidential information, that the policy that has been adopted throughout in relation to them is precisely what both he and I wish, that is, to minimize the garrisons we detach from our active army to the very lowest possible point, trusting as far as possible to the patriotism of the Colonies for local assistance on the spot—to minimize it almost entirely to such a supply as may be necessary of expert gunners, who shall train and develop the gunnery practice of the men on the spot, and that for the single purpose of doing the precise thing which, as I have understood, both brothers have insisted upon, namely, providing such protection to our coal that we shall not be exposed to the danger of a single cruiser running into a coaling station, filling her bunkers, burning the rest of the coal, and getting clear away. That is the difficulty that must always present itself to the Navy, unless there be a change of policy at the Admiralty. Everybody who has had the least to do with Admiralty decisions in the matter will bear me out that, not once, but again and again, the Admiralty have declared that they will in no way whatsoever be responsible for the defence of ports or coaling stations, and they insist upon it that the Navy shall be kept clear for the work of destroying the enemy's fleets on the open sea, and that the coaling stations and ports are absolutely out of their charge. If the Navy intends to take charge of these ports and coaling stations, and means to be responsible for their guardianship, let it be understood that they do so, but do not let it go forth as the Admiralty says at present: "We will not send a ship to you of any kind to defend Singapore which we guarantee shall remain there. We will send you a gunship if it happens to suit our convenience, but we will not be responsible for detaining it there so as to defend Singapore." That question should be settled. I do not think myself it is a question in which the Army can have any other than one interest, and that is to have as small as possible a portion of the Army told off for the defence of these distant coaling stations, because the Army cannot be spared for their defence without detracting from its available power elsewhere. If you do not want us there, then let us get away. We none of us want to be there. But do not let there be any misunderstanding about it, and do not let us be told that you are relying upon us for the defence of these stations, when in fact you are not doing so. There is one other point which has been raised several times in a general form, viz., the present uncertainties of naval battle-action, that I want to illustrate by one specific question: I do not know how far the elaborate experiments which France has been of late making with high explosives are known to any Officers in this room, but they have been carried out with the greatest care, the most elaborate skill, and at unlimited cost; nor is it a secret that France has so absolutely convinced herself of the power of high explosives, both against ships and in the field, that she is storing them as rapidly as she can, and expending large sums in the elaborate storage of fresh explosives, continually employed in the refilling of shells that have deteriorated, so that she always has fresh material ready for instant use. I am told at the present moment the Navy do not like touching these high explosives. I can well understand it; there are not many of us that do, and one difficulty undoubtedly about all these matters is that shells filled with high explosives do not keep, and that you never know when you are going to run some risk with them if they have not been recently filled, or that they are not very suitable for ships like ours, commissioned for three years at a time. What I want to ask Admiral Colomb is this: is it not possible at least that for the very short move across the Channel, high-explosive shells, placed fresh on board and possessing the appalling destructive power which is attributed to them by those who have carefully tried them, may prove unpleasantly effective against a fleet of ours which, because of its duties requiring it to have on board for distant voyages explosives which will keep, has not ventured to make use of them? Is it not at least possible

that the little blue streak of water might be cleared by them for twenty-four hours? If that is so, I want to know, do you really accept that statement in the "Times" article, that if only the danger and the possibility of invasion is upon us we are going to bend the knees at once. It is not in this case a question of our being starved, or anything of the kind. That may happen without our being starved, and without our having had our commerce seriously injured at all. I, for one, say there are more than 30 millions of us in these islands, and I do not think we mean to submit, and I do not believe the "Times" represents the feeling of the English nation that they are going to submit because the mere danger of invasion has come upon us. We must be ready on shore as well as by sea if we are not to run this risk.

Admiral Sir E. FANSHAW: I wish to make one or two observations upon what General Erskine has said, because I thought his remarks were not antagonistic to the paper that Admiral Colomb has read. He showed that if we were to do away with all our land fortifications we should do wrong; but I do not understand Admiral Colomb to have said we should do so in his paper. I understood him to say that, as has been done in former times, we ought to have means of defence in case of raids, or that any portion of an enemy's invading army effected a landing in this country. I think the two things are very much in accordance with each other. After General Erskine the meeting was addressed by Sir Lothian Nicholson. I think when he said that there was but little in former naval experience to guide us for the future, he expressed an opinion absolutely contrary to that of the Navy. The coaling stations have been spoken of a great deal, and though, I must say, I think Admiral Colomb's general principles as to the manner in which this country ought to wage naval war are sound, yet I do not think they are applicable to the circumstances of coaling stations and foreign fortresses such as Malta. We have had the advantage of hearing Colonel Maurice, who explained what the case really is with regard to these; and I entirely concur in what was said by Colonel Maurice on the subject. Admiral Colomb asked us, in order to establish the principles on which we should wage naval war, to look to past history. Everyone knows that the principles of war are not things that readily change; they lie deep, and are not variable. The instruments and methods with which war is waged vary, of course, as science progresses; but the principles remain the same. Admiral Colomb asked us to look into the history of the Navy with a view to ascertaining what our position is with regard to the strength required for the Navy. I do not think it can be denied, for a moment, by anyone who does so, that this country depends altogether to maintain the position it has as one of the greatest of the great Powers of the world, upon its having the command of the sea. If there were any question of our losing that command of the sea, we ought immediately to make the Navy strong enough to prevent it; the loss of it is not a thing to be allowed; it is that on which the existence of this country depends—as a great Power. Admiral Colomb went through the history of the country, and referred to many cases to enforce this. Taking the crucial instances when the war operation in contemplation was the invasion of this country, he mentioned four within the last 150 years. The two most important were those in the Seven Years' War in 1759, and the great endeavour of Napoleon. They show that the military opinion of those who undertook them was, that the only way to do it was to prevent us from having the command of the sea. I should not care to refer to the first one at any length, because the second is much more important; but from the first one we may learn what this country can do when it is ruled by a Minister who understands and thoroughly grasps the fact that it is his business, and a great proof of his statesmanship, to wield and to apportion the various portions of the war resources of the nation. They will see what we can do when that is the case, instead of its being left to the two Departments to settle themselves. I now refer to the last great attempt at invasion under Napoleon, claiming as his opinion, being that of one of the greatest masters of war the world has ever produced, that this country was not to be invaded until he had acquired from us the command of the seas where his invasion was to be carried on. He had an enthusiastic army which he had trained for years for the purpose; but he could not get the command of the sea away from us, and he therefore failed. I think anyone who will consider that instance will find sufficient reason for saying that it is absolutely necessary that we should allow no question

whatever about our having the command of the sea, as far as such a thing is possible to be made mathematically certain. Sir Lothian Nicholson thinks that it was to be regretted that such a paper as Admiral Colomb's had been read, because the Press will publish it; and the public will only hear one side of the question, because the paper will be given in full, and the discussion will be condensed. But the very *raison d'être* of Admiral Colomb's paper, from its first paragraph, is that certain statements had been made in a former paper, written by an Officer on a detail of one branch of military science, viz., arming batteries with quick-firing guns. A great part of that paper went into the fundamental rules upon which the whole armed force of this country are to be employed in war. I myself, when I heard the arguments, thought them beyond measure unsound, and to indicate that that Officer was not very well acquainted with the history of the wars which this country has been engaged in during the last two centuries; and I very much regretted that it should go forth from this Institution without some reply; but I felt that we were then discussing quick-firing guns in batteries. But the opinions expressed in that paper have gone forth to the country, and I think it was quite right that they should therefore be discussed here. Now, with regard to the value of the past history of the Navy as a guide to the future, we should recollect that, included in naval history, the Army has got a very glorious history. I should like to trace that glorious history of the Army through its annals. I would go back as far as the war of the Spanish succession, which rendered immortal the name of Marlborough. There was an English army on foreign soil. How was that army supplied? That army was supplied because we had obtained the command of the sea at the Battle of La Hogue. Go on to the next great war—the Seven Years' War. The brilliant exploit of General Wolfe, which ended in the capture of Quebec, was rendered possible by our having the command of the seas, to maintain which large fleets blockaded Brest and Toulon. The Battle of Plassy was won by Clive; but this would never have been fought if Admiral Watson had not been there with his fleet to protect and co-operate with the army. In the next war the great operation of the Army was the defence of Gibraltar, which Admiral Colomb has referred to. Look at the wars of Napoleon. The brilliant expedition to Egypt was only possible on account of the command of the seas having been previously obtained by the Battle of the Nile. I need not dwell on the Peninsular War, which was rendered possible by the absolute command of the sea having been confirmed at Trafalgar. These are facts in which I think our friends of the Army must recognize that those brilliant achievements which have distinguished their Service so greatly for the last 200 years have been possible because we held the command of the sea.

[The discussion was then adjourned to 4th March.]

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Monday, March 4.

ADJOURNED DISCUSSION.

GENERAL SIR FREDERICK STEPHENSON, G.C.B., in the Chair.

Lieutenant-General Sir GERALD GRAHAM, G.C., G.C.M.G., K.C.B.: Sir Frederick Stephenson and gentlemen, whatever may be the merits of Admiral Colomb's interesting paper as a sample of sound reasoning, there can be no question as to its ability, and as to its having proved most valuable in eliciting expressions of opinion from competent Officers of both Services, though I think the public will naturally attach more importance to the opinion of a naval Officer who differs from Admiral Colomb, as all have more or less hitherto, than to that of a military Officer like myself. I think that all who wish well to the defences of the country, and I include the gallant Admiral, although an adversary, have reason to feel grateful to Lord Carnarvon for the admirably clear statement he made at this Institution at the previous meeting, and that we may feel some confidence in the decision of a Commission of which he