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Thoughts Upon Invasion and Upon the Means Available, or which may be Made Available at a Few Weeks' Notice, for Securing our Coast Line Generally Against Sudden Attack

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Friday, February 24, 1888.

THE RIGHT HON. LORD BRASSEY, K.C.B., in the Chair.

THOUGHTS UPON INVASION AND UPON THE MEANS
AVAILABLE, OR WHICH MAY BE MADE AVAILABLE
AT A FEW WEEKS' NOTICE, FOR SECURING OUR
COAST LINE GENERALLY AGAINST SUDDEN ATTACK.

By Colonel SIR CHARLES H. NUGENT, K.C.B.

THE CHAIRMAN: Gentlemen, it is not necessary to introduce Sir Charles Nugent to this audience: he is too well known to you to need any introduction. He is known not only by his distinguished service throughout his professional career but also for the excellent work which he has from time to time done in this theatre, which work he is to follow up by the able paper which he will read to you this afternoon, and which work I trust he will never abandon until he sees it satisfactorily accomplished. The essence of Sir Charles Nugent's paper is organization and preparation; but the way to secure organization and preparation is to keep the public who may not be cognizant of all that is necessary to be done in the way of organization and preparation, informed of the things which are neglected. The only way in which that information could be given is through the services of Officers of the authority and experience which belong to Sir Charles Nugent. I can conceive of no service more valuable to the public than that which is rendered by Officers who have had that experience and held those appointments which invest men with authority, and who when they find themselves in command of leisure, continue to give their attention to the work in which they have been engaged, and to assist, as Sir Charles Nugent assists, in a very powerful manner, to form a wholesome public opinion and a sound appreciation of the requirements of the country. I venture rather unusually to say a few words before the lecturer commences, because I shall have to ask him to extend his indulgence to me and to allow me to leave at a comparatively early period of the meeting, as I have an important engagement to fulfil in the country. I have now very much pleasure in introducing Sir Charles Nugent.

In the armed uncertainty, which is almost worse than war, in which three of the five Great Military Powers of Continental Europe stand, and in which the other two have a painful and almost tangible interest, we in these islands have fortunately no share, yet it would be misleading to assume that we should be able to look on unconcernedly should the present state of expectancy pass into action; the issues of such a war, should war break out, must be fraught with the most far-reaching consequences to Great Britain; it may indeed be of less consequence to this country by whom the Baltic is held, but the keys of the Black Sea cannot be conveniently trusted to Russian hands if British Commerce is to continue upon its present Trade-routes to the East; and so,—as which ever side wins, Turkey, our old

ally, will probably lose,—we, who have no desire to see her weakened, cannot view the prospect of strife with unconcern.

Moreover there is this further danger that the victor may emerge from the strife unexhausted, with a large army which he dare not disband, and which he can with difficulty refrain from using—nay, which may insist upon being used.—Power begets the lust of sway.

What is this to us? some will say. We have no intention of interposing in their quarrels. That may be so, but the man who in a general *mêlée* takes no side, ends by being the enemy of all, and we may end by being in that unenviable position. It is possible that I am indicating a state which may never arrive, but still we *may be in such a position*, and it is well to be prepared for it.

The high-souled moralist, intent only upon the advocacy of peace, and desiring to make his anticipations square with his moral prejudices, may say, that to attack a scrupulously unoffending nation would be the height of immorality, and utterly repugnant to all the principles of international law and international right—the cynic will laugh, and well he may;—if Law be but the expression of the will of preponderating Power, the interpretation of International Law will not, we may be assured, rest with the weaker Power, it will find its true expression in the well-known couplet—

For those will take who have the power,
And those must keep who can.

And as for International Right he will say, and say truly, that it is but another term for International Might.

Upon the possessor of unlimited Power, the only restraint is the limit of his inclinations,—in dealing with the past of Europe it has, it seems to me, been the fashion to dwell so much upon the achievements of Napoleon, while his many ill-considered schemes and undoubted failures are deliberately placed out of sight, that he has come to be regarded as a monster of military capacity such as is seldom seen and produced only at very long intervals;—yet in truth—History is pregnant with such examples;—it may with confidence be asserted that *the occasion makes the man*; to the reflecting mind it is astonishing how small is the difference between the leader and the rank and file; the claim of the king of the tinkers to eminence above his followers will after all be found to rest upon an extra smudge upon his nose.

It may well give us pause to speculate upon what may happen at no very distant future,—the victor in the coming strife, *for come it must*, may stand the possessor of unlimited resources, resources which Napoleon never imagined in his wildest dreams,—trained men outnumbering his in the proportion of at least five to one—means of transport by sea and land immeasurably greater, independent of weather, and at least five times as swift;—means of communication so incalculably rapid as to be practically instantaneous; better food in far smaller compass; death-dealing weapons lighter and more mobile, delivering with unerring certainty their blows from tenfold distances with twenty-fold rapidity.

When in the previous history of the world has even a tithe of this

fatal power of death been concentrated in a single hand? Will its possession, think you, make the possessor more moderate? Will there not always be old scores to wipe out? Amongst nations there is no such thing as offering the other cheek to the smiter. What Napoleon projected—and he with inferior means was within an ace of success—the Attila of the future may attempt, and with superior means may succeed in. Why should the one have more scruples than the other? What tempted the former? Our prosperity! It is more tempting now. It is perhaps forty times as great as it was then: The national wealth was estimated in Pitt's time at less than 200,000,000*l.*—it is now considered to be more than 8,000,000,000*l.* 2. Our defenceless state!—are our Defences in better order? Is not our commerce upon which we depend more world wide and far more vulnerable? The food stuffs upon which we live,—do they not come from longer distances and in greater quantities? Then, these islands were self-sustaining—now, with more than twice as many mouths to feed, they only produce food for one half their inhabitants.

But after all, some may say, Napoleon is only an instance,—and an exceptional instance,—of utter want of scruple in the wielder of enormous power. Now this is by no means the case—without leaving the history of our neighbours and present good friends, if we go back some 150 years, we find the Ruler of France, the most powerful potentate at that time in Europe, the Grand Monarque, deliberately and without scruple assailing the most peaceful and most prosperous State in Europe,—incited thereto by its littleness, its wealth and its independence of opinion, for so far as I can see he had no real, certainly no just, ground of quarrel with it; but, bad as his conduct was, that of the King of this country was worse, for, regardless of treaty obligations with the States of Holland, unmindful of family ties, he, the abject, dependent hireling of France, did not only connive at, but did give the British Fleet to assist in, the iniquitous enterprise of the Grand Monarque.

My sympathies are entirely with the States of Holland, in whose people I recognize many and the best qualities which give character to our own race,—their aptitude for the sea, their commercial enterprise, their stubborn independence, their freedom of opinion, their rugged honesty;—yet alas! in them I recognize also other and worse points of resemblance,—their political divisions, their indifferent selfishness, their apathetic neglect of even the most evidently necessary preparations,—and they—*absit omen*,—were near being annihilated,—in twelve days the Country of the Generalities and three Provinces—Guelders, Utrecht, and Overijssel—were in the hands of the French, and the remaining States were only saved by self inundation;—Holland remained submerged for two years.

Interesting as is the history of this Dutch struggle, we might be content to leave it here but for two lessons we should do well to draw from it, one defensive and one offensive. The first is that neglect of due preparation, if it does not lead to irretrievable disaster, entails tenfold eventual cost, and that the States were secure on their sea-

front, they were only vulnerable along their land-front. What in their hour of need would they not have given for the extension of their sea-front, to embrace their whole country? The second is that their strength, their carrying trade, was also their weakness, for with them then, as with us now, their transactions were with every nation, and covered every sea—their carrying trade was at that time twice as large as ours—so they concentrated, and were compelled to concentrate, every effort upon their fleets, not as a *means of defence* so much as a *means of offence*.

Thus De Witt writes to the Commissioner of the United States with the Dutch fleet, "I consider it of the greatest importance to use all means for ravaging the English coast and seizing on the fort of Sheerness, as well as for burning and destroying the English ships which have been hitherto detained in the Thames; our lighter frigates might then sail up the Thames and devastate the country, so as to cause consternation in the Defenceless Capital, and to incite the malcontents in London to rise;" and De Groot, the Dutch Ambassador in Paris, writes, "It is only the Fleet which can make any impression on France," and he proposes to employ the Fleet also against the French Colonies.

Let us pursue a little further the parallel we have been tracing—the States of Holland, abutted on neighbouring countries, over one-half their Frontiers, from which they were distinguished by no natural features, save in one portion by a great river, which is a source of weakness rather than of strength; we are encompassed by a *yet* inviolate sea, which effectually severs us from our neighbours; they, these frontiers passed, and their enemies' legions within their Territory, could give back to the envious waters the soil which they had recovered from the sea by their stubborn energy, and which they maintained by their unceasing labour; we, our friendly waters passed, cannot call in the timely aid of Nature, we must depend on our own right hands; they, unwisely indifferent to the necessity of preparation, were still a homogeneous people, with ardent feelings of patriotism;—we more unwisely, because contemptuously, indifferent to the necessity of preparation, are very cosmopolitan, with a large and influential, because wealthy, class, only English, and caring for England, so long as they thrive and are well being. These—how far can we depend upon these?—sorely tempted by the blast of adversity, may be an occasion of trouble, and must be a source of anxiety.

The lessons to be learnt, then, are the necessity, the supreme necessity, for *organization* and *preparation*,—and I ask of myself the questions:—In the event of our being invaded,—have we an organization upon which we can rely? What is our state of preparation? In short, are we prepared at all? But when I take up my pen to answer these questions, it occurs to me that it was without sufficient consideration that I accepted the invitation of the Council of this Institution to invite attention to-day to the measures "To secure our Coast Line generally against *sudden* attack with the means of defence at present available, or which may be made available, at a few weeks' notice."

I scarcely anticipated that the task would prove so uncongenial as it has; in the few weeks which have elapsed since the Council's invitation, I have turned it over in my mind anxiously—again and again,—most anxiously—and the more I turn it over the less I like it.

If I am compelled to answer directly the question what measures are to be taken in a short time (*sudden* is the Council's word) to place our Coast Line generally in a state of security, I must in honesty reply, "It cannot be placed in a state of security in a short time."

Must we then do nothing? Must we sit down with our hands folded, and contemplate our state of unpreparedness? By no means: we can do nothing suddenly,—we can do but little in a few weeks, still we can do something, and we should do what we can; but that little cannot be made to cover the Coast Line generally.

The Defence of the Coast line should be *amphibious*, that is, partly on the land and partly on the water. On the Land, certain Places call for such permanent Defences as shall ensure to them absolute security;—in this class are the Great Military Ports and Arsenals. Next, secondary places which call for such defences as shall render them secure from predatory assault, and enable them to hold out for a considerable time if attacked in force,—of this class are the lesser Military Positions and the Great Commercial Ports,—lastly, all other places on the Coast which should be denied to an enemy, in fact to the remainder of the Coast generally;—it is this third class with which we are at present concerned.

I may here remark that even with ample time and means at disposal it would be, I will not say impossible, but inexpedient to attempt to defend the whole Coast line. Most certainly it would be inexpedient wherever the water is deep inshore; the conditions of offensive naval warfare have so altered that Defensive works of ordinary construction cannot be resorted to unless in exceptionally advantageous positions; works of light profile on low shores, such shores as are favourable for the landing of troops, will seldom be able to stand against the heavy guns which covering squadrons will in future carry. The most favourable positions for such Defensive works must, if not protected by Ditches, be so far inland as to be out of reach of the guns of attacking ships, but in positions whence they can play upon the place of landing or harass the Invader, and cause him to spend time after he has landed in throwing up works of Defence to protect his Base.

The disposition of Towers and Batteries, as you may see them along the South and East Coasts, will never be resorted to again. This would not, however, preclude use of them wherever they may now be found.

Submarine mines must have the protection of guns, either in Gun-boats and Coast Defence vessels, or in batteries ashore, and so likewise as a general rule must Torpedo-boats; this is especially true of locomotive Torpedoes, that is, Torpedoes controlled and operated from the shore; the places of operation must have gun protection and concealment.

No doubt submarine mines may be improvised and provided locally, and so, perhaps, may be provided means for making use of White-head Torpedoes, if there be sufficient store of these in the Kingdom for the supply of localities; but locomotive Torpedoes cannot be used with success in such amateur, or rather Volunteer, fashion.

Speaking generally, then, the points of the shore which require Defensive attention will be few, and will be limited to the Termini of main and direct Lines of Railway to the Capital, or to points which may offer themselves as favourable to break the Front of Invasion; the objects being to delay the enemy as long as possible, and so give time to break up the Railways, and to remove the Rolling Stock, to carry away cattle and provender—and for strengthening the fighting positions in rear.

It is evident then that little can be done upon the spur of the moment for the Coast line, and undefended Towns standing boldly on the edge of accessible Coasts must be left to themselves. By local exertion they may perhaps preserve themselves from single cruisers, but that would seem to be the most they can expect.

In such local effort the services of their seafaring populations can be turned to good account. It is a matter of wonder to me why no solid attempt has been made to recall to existence the Sea Fencibles, which in 1805 mustered 25,000 men. We have 135,000 Fishermen, who know the water and who know the land; a good organization, and a short annual training, which need not entail great cost, would enable them to render most valuable service, and would afford employment to many retired Officers, full of energy and experience, who are now eating their hearts away in enforced idleness.

On the water the Defence of the Coast line would be with the Coast Defence vessels, Gun and Torpedo-boats, and Auxiliary Cruisers. No addition can be made to the Coast Defence vessels in a few weeks, nor can Gun and Torpedo-boats, except for local Service, be improvised in material numbers, but a considerable number of fast Auxiliary Cruisers may be obtained, and they can do efficient service in patrolling our own shores and watching the enemy's coast.

The Positions on the Coast which it is intended to defend, and they should be as few as possible, should be marked out, the local forces, Militia and Volunteers, should be directed to assemble on them, first to form the Defences of the Positions, and then to defend them—the arrangements should embrace the Establishment of Telegraphic Communication with the Centre,—the destruction of Railroads,—Bridges and Tunnels,¹—the removal of Rolling Stock; the removal of Cattle, Munitions and Stores of all kinds;—and the withdrawal as far as possible of the inhabitants;—all this would of course be done in concert with the Naval Authorities, who would have their attention drawn to the Positions chosen for Defence,—would arrange for watching the Enemy's Ports with fast vessels carrying their own

¹ This is so obvious as scarcely to need allusion, yet we know that in the Franco-German War the French did utterly neglect these precautions.

electric communication with the Admiralty,—for patrolling our own shores;—for the removal at the proper time of buoys and lights, and would enrol a Sea Militia for local Amphibious Service, parcelling the kingdom into districts which ought to be coterminous with the Military Districts.

All this seems simple enough on paper, and indeed with any organization other than that which has obtained in this country might be readily carried out. What we need is a *War Minister* directing the Military Policy of the Nation, with professional Experts under him, *one* administering the Army, and *one*,—*not a Board*,—administering the Navy,—and that War Minister should be an expert, it matters little whether a Military or Naval Expert, so long as he is an Expert.

What would be the object of Invasion? London.

Now we are not likely to be invaded so long as our Fleet is in the way; but our Fleet may be either destroyed,—defeated, and driven off to shelter and refit,—or decoyed away.

We need not discuss the first of these alternatives, we should be in an uncommonly bad way if it were destroyed. I suppose more than one Continental Nation could devote several hundred thousand fighting men to the purposes of invasion, and all that would be left to us would be to fight it out as best we could.

I do not here attempt to forecast the result.

The second and third alternatives differ for the purposes of our discussion only so far as the one leaves more time (though both are limited) than the other at the invader's disposal, but this much we may say, that our Fleet is at least as likely to injure an enemy as to suffer injury, and ought, especially with casual reinforcements from abroad, to be more quickly able to try conclusions a second time; and that the deception which sufficed for the decoying away of the Fleet should not remain long undiscovered.

The Fleet then being out of the way, what have we for defence of our shores? On the water we have, 6 Coast Defence Vessels, 9 Gun Vessels, 49 Gunboats, and 55 Torpedo-boats.

On the Land, we have the Great Arsenal and Military Ports defended (?)—I shall have something to say of these later on;—we have also a certain amount of defence for the Great Commercial Ports, though in some of these the main Element of the Naval portion of the defence is in the District Ships, which belong to the First Reserve and will, I presume, be called away to augment the Channel Fleet as soon as war is declared: of these Defences too I shall have something to say farther on, but it may suffice to say here that in most of these Commercial Ports the Defences can be fairly strengthened in moderate time,—so strengthened at least as to place them beyond the reach of a Paul Jones.

It may be sufficient for our present purpose, anyhow it will be sufficient for the time at our disposal this afternoon, if I deal only with the Coast from Portsmouth to the Forth, because the Coast on the South and East lies nearest to the Continent, and because beyond these points the distance of the Coast from London is so great that

an enemy would be less likely to make for it with a view to a *sudden dash on London*.

On these Coasts, in addition to the Military Port of Portsmouth we have, carefully fortified Positions at Dover, Sheerness, and the Thames; Secondary positions at Newhaven, Harwich;—and less important positions at Littlehampton, the Tyne, the Forth, and the Humber; these latter three coming under the category of the Principal Commercial Ports defended or *to be* defended, though the defences of the latter are poor and not properly developed,—however, local exertion and local resources well directed might do much, if time allowed, for all three; then we have at various points Towers, mounting generally one gun, some few with ditches, and placed a little inland, but most on the shore, with here and there Batteries or Redoubts mounting in older times a considerable number of guns, not mounting, not indeed modified to mount, modern guns, and certainly not capable of resisting modern artillery. You may notice them about Eastbourne and beyond Hastings; and forming what *was* a very complete defence from Dymchurch by Hythe and Shorncliffe to Folkestone, and so on to Dover,—and—which might still, with some labour and rearmament, and making its proper use of the Military Canal, form a position strong enough to deter an enemy and throw him elsewhere.

In many places, however, the Batteries and Towers have decayed away, partly destroyed by the action of the sea, and partly in consequence of the supineness of the authorities.

On the South Coast in the 136 miles from Selsea Bill to Margate are 42 miles of cliff and 6 miles of mudflats, the remaining 88 miles are accessible everywhere and generally unguarded,—making a liberal allowance for the Defences mentioned above there are at least 60 miles absolutely defenceless; the water is open and the 3 fathom line is for most of the extent about half a mile from the shore; moreover, this coast is well known to our neighbours opposite whose fishermen and boats habitually frequent it.

On the East Coast from the Maplin Sands to Yarmouth, a length of 90 miles, the protection is limited, with the exception of at the Harbour of Harwich, to a few obsolete Towers and low Batteries;—on this coast there is scarcely any cliff: and banks lie off the shore at a moderate distance from it, and fairly parallel to it with a general depth inside them of 16 feet at low water.

Between Selsea Bill and Yarmouth there are 140 miles of undefended shore.

From Yarmouth to the Wash, 80 miles, there are no defensive works; while from the Wash northward to the Firth of Forth, upwards of 300 miles, there are Works to hold the Humber below Hull, which has also the protection of an armoured Battleship of the 2nd Class and two Coast Defence Gunboats.—Batteries, such as they are, at Hartlepool and Sunderland;¹—and Works of some development to secure the Mouth of the Tyne.²

¹ Tees has a division of Volunteer Submarine Miners 57 strong.

² It has a division of Volunteer Submarine Miners 114 strong.

The Forth¹ is defensible so long as it retains in its waters the Armoured Battleship, the Gunvessel and Gunboat which are at present there; but this Battleship, as the Battleship in the Humber, belongs to the 1st Reserve, and will, I suppose, be called away at the outbreak of war to augment the Channel Fleet, or until the larger Battleships of the 2nd Reserve are ready for sea.

London being an enemy's object, and these shores being for the most part undefended, what have we to stop an enemy between the South Coast and London? Between the South Coast and London there are no works except in front of Chatham, but upon the land we have 71,810 Regulars of all ranks; if from these, however, be deducted the non-combatants, the Depôt R. Artillery and R.E.'s under instruction, the available total for service in England is not more than 66,000 of all ranks; of these 42,000 at present are in the different garrisons, such as Portsmouth, Plymouth, Dover, Chatham, and as even with the services of the adjacent Militia and Volunteers these garrisons will still be not too fully manned, so that none can be spared, the total of all ranks falls to 24,000. What proportion of these are recruits either untrained or partially trained?—I have no means of ascertaining, but the proportion must be considerable, not less I should think than one-fourth; and a fourth which could not be made soldiers in a few weeks.

We have, however, the Army Reserve numbering 51,000, and the Second Class Reserve numbering 5,000, in all 56,000. I assume all of these would muster to their standards Territorially, and that 31,000² would be available, so that the Field Army would amount to 55,000, and to this should be added such Militia and Volunteers as might at once be drawn to it wherever it took up position for delivering battle. Supposing such position to be in the neighbourhood of London then the Militia to be mustered to it would be from London, Middlesex, and Surrey, and would be 5,228 line and 168 cavalry, and the Volunteers should be 31,314 line, 2,617 Artillery, 2,250 Engineers, all told; but these Volunteers have no organization as a fighting body, and lack transport, field equipment, great coats and guns, so that if they all responded to the summons they could not for some weeks be put into the field as a manœuvring body, and even then should be brigaded only in small numbers with regular troops, so that 15,000 are as many as should be counted on for some weeks.

Since writing this, in the "Standard" of 2nd February is a notice to the effect that "the Volunteers have been assigned a definite place in mobilization, that no effort has been spared to *assist them to become*," not to make them, "efficient,"—that nearly "50,000 have been provided with great coats," and that "the experiment of

¹ It has a division of Volunteer Submarine Miners 63 strong, and Fife Artillery 945 strong, and Midlothian Artillery 579 strong.

² The Reserve to be mustered to it would be at first the Cavalry, Artillery, Engineers, and Guards, and the Line from the Counties round London, and then as time went on from the other Midland Counties, in all perhaps 31,000 men.

Volunteer Transport has been tried with such marked success, that it was *now intended to extend it*—"now, after thirty years' existence—"eighty guns have been *allotted*," it did not say *issued*, to certain inland Volunteer Corps,—not however assigned for the defence of our Coasts; and that some Counties were registering horses and wagons in view of "the Volunteers being able to take the field immediately on mobilization without reference to the War Office;" submarine Mining Corps were being sanctioned for the defence of our principal Commercial Ports,—the expenditure of 110,000*l.* for the Brennan Torpedo could only be justified by our *at once proceeding to place our Coasts in a state of Defence*,"—and it added that during the present Government's short period of office, our Home Army was being systematically equipped for National Defence. Well, gentlemen, I can only say I am heartily glad of it, and shall be still more glad when the result bears out the boast; I have heard of these schemes, with the exception of the registration of horses, off and on for the last fifteen years, and as to the Mobilization Scheme, for having gone a long way to carry out which credit is taken, it has been on paper since 1876.

Then it goes on to say that the money voted for our Coaling Stations Abroad would enable us to mount the guns, and to complete several Stations in the present year. I mention this in order to apply a test to this one of the remarks, and so to gauge the value of the rest: this test is an utterance of Lord Brassey at the London Chamber of Commerce. Lord Brassey said—I am speaking from recollection and so am open to correction—at Simon's Bay, Cape of Good Hope, the Works, Imperial Works mind you, not Colonial, are completed, but not having Breech-loading Guns ready, they were going to place in the emplacements, as a temporary measure, muzzle-loading guns. Now muzzle-loading guns, I may tell you, will not work in breech-loading gun emplacements without they are altered; a temporary measure, forsooth, once in the emplacements, will they be removed? I fear they will verify Lord Palmerston's saying, that nothing is so permanent as a temporary appointment,—not improbably our grand-children, visiting the Cape on pleasure or on business, will see this astounding, this everlasting memento, of our foresight.

Experience of the War Office teaches me that there is a struggle for mastery, which has become chronic, always going on between the military and civil elements;—at one time one prevails, at another the other. Whichever gains the upper hand the taxpayer in the long run suffers. Under present arrangements the military element appears to have become supreme.

Subsequently, to show how thoroughly in earnest the War Office was, it was mentioned that the age of retirement for Captains and Majors was raised,—that 75,000*l.* had been saved in various small contractions, which as likely as not may all expand again with the next change of Government; the utterance wound up with the astounding statement that it was proposed to promote at all hazards the efficiency of the Army, and to meet the increasing demands of our Empire,—how?—by a *reduction of individual items of expenditure*.

Contrast this with the action of a neighbouring nation, fortunately our very good friend, which with an army of 1,500,000 men voluntarily incurs an expenditure of 14,000,000*l.* for 700,000 additional men, and which has in the last year raised, on Loan also,—for extraordinary Military Expenditure 44,700,000*l.*, viz., 35,500,000*l.* for the Army, and 9,200,000*l.* for the Navy,—and had besides spent from the French war indemnity 33,500,000*l.*, while we in the last six years have provided, after in vain trying to shirk finding the money, 378,800*l.* (about the sixth of the amount recommended by the Royal Commission), for what may prove matter of life or death to us,—I refer to the Defences of our Coaling Stations Abroad,—and of which we seem only to have succeeded in spending 178,000*l.*

The same remarks as to lack of organization apply, though in a less degree, to the Militia,—and it is not probable that all told we should have a larger field force to cover London than 75,000 men, of whom about two-fifths would be raw soldiers.

I assume that the Militia and Volunteers of the Counties between London and the sea would be arrayed in their Counties, at any rate for the first moments of invasion, and that they would be drawn away, in part at least, to supplement the garrisons of Chatham, Sheerness, and Dover; they might perhaps release a few regulars when once the direction of the invader's march was committed; however, they are in reality very few, viz.:—

	Militia.	Volunteers.	Total.
Kent	3,580	6,940	10,520
Sussex	1,752	1,062	2,814
Essex	1,696	3,579	5,275
			<hr/> 18,609

of whom not more probably than one-half would be efficient.

What would these 75,000 men have to meet?

That depends upon many circumstances, and chiefly whether the invasion was undertaken by one nation (perhaps not very likely), or by two nations, as in the case of the invasion of Holland by Louis XIV of France, and Charles II of England; but we may feel sure that it would be more than twice 75,000 men, picked soldiers, and commanded and handled by Generals skilled in handling large bodies of troops.

Napoleon I allotted 132,000 men for the Army of England, which he afterwards increased to 178,000; and in 1870 Germany had placed 300,000 men west of the Rhine (a distance of 500 miles), in fifteen days, after the declaration of war; and within six weeks had arrayed 780,000 men in France.

These 75,000 men would have to meet then twice as many, or to be within the mark let us say half as many more picked fighting men, well found in every respect; and to enable them to meet this stronger force with reasonable prospect of success they should meet them in well-prepared positions. Who is to prepare these positions? Our Volunteers and

Militia have had no practice, and even digging and shovelling require practice, and the Line with the exception of a few Regiments are of no use in such work. It is a standing reproach to us, that we who produce the best, the only, navvies in the world, cannot produce soldiers who can dig and shovel. Our rulers do not in their hearts appreciate the true value of this, yet in the American War of Independence, American Generals made full use of this; and so in the Franco-German War did one French Corps, but then it was commanded by an Engineer, and it was the most successful in the field. Has any one such position been thrown up? Nay! Has any one ever been marked out? and where are the guns for it? Even if any of these positions have been thrown up,—throwing up alone is not sufficient, they should be occupied by their defenders, and the defence of the positions rehearsed. Similar measures should be taken at or near the sea coast; this is very important as the enemy is most assailable at the moment of landing. Have such measures been taken? and if they have, how are the positions to be manned? Will your 75,000 available men,—and you will have no reserve of real soldiers,—be so mobile that they can occupy to the last any such positions on the coast, and fall back in good order to the fighting positions in advance of London? And in falling back will they be able to hold the enemy in check sufficiently long to give time for making these positions defensible? Let us hope that these 75,000 men will be so mobile, for a good deal will depend upon these men,—these men with no reserve. Yes! a good deal,—more than some of us imagine. Let us hope—ah! yes, we have lived a long time,—and so may continue to live—in hope.

But what if we should be invaded upon two sides of London? There is much to recommend the North side to an Invader, and I confess I have a predilection for the North and East. No doubt the North side is farther from the sea, but it is not so very far after all, and the East shoreline is accessible and practically undefended. The country in advance of London is less favourable for defence; upon this side (including the East) and therefore open to an invading Force is the Powder Establishment at Purfleet, the Powder Factories at Waltham, the Small Arms Factory at Enfield, and ought I not to say the Arsenal at Woolwich; moreover a hostile army on the North side interposes between London and the great manufacturing towns in the Midlands and beyond,—cuts off the great Port of Liverpool with its vast stores of grain, only second in importance to London,—cuts off Elswick Arsenal, and holds at its mercy the produce of all the centre of England; and if the available fighting Force is occupied on the South has nothing to oppose it,—or rather has only 7,844 Militia, 11,676 Volunteers and 168 Yeomanry Cavalry.

Moreover it cuts off from the South 5 Regiments of Cheshire Volunteers, 2 Engineer Corps, 8 Corps of Lancashire Artillery, and 22 Regiments of Lancashire Volunteers, thus paralysing 23,534 Line, 5,658 Artillery, and 1,094 Engineers.

Let us see what there are to oppose it. In the Coast Counties, in

	Militia.	Yeomanry.	Volunteers.	Total.
Essex.....	1,696	—	3,579	5,275
Suffolk	2,176	168	—	2,344
Norfolk.....	2,272	—	2,926	5,198

 12,817

 Or 1,928¹ Artillery, 5,088 Militia, 168 Yeomanry, 5,633 Volunteers.

Around north side of London—

	Militia.	Yeomanry.	Volunteers.	Total.
Hertford	—	—	1,278	1,278
Bedford	1,696	—	914 ²	2,610
Buckingham...	—	336	1,093	1,434
Oxford.....	1,696	—	1,186	2,882
Cambridge	—	—	1,463	1,463
Huntingdon....	—	—	—	—
Northampton ..	1,272	—	1,100	2,372
Warwick	1,696	336	2,200	4,232
Leicester	686	—	1,100	1,786

 18,007³

Or 6,996 Militia, 672 Yeomanry, 10,339 Volunteers.

And farther, if this invasion with the North side of London as its object, should comprise a force specially organized to seize on the Crouch and the Blackwater; and this need not be a strong force, 25,000 men or even less would suffice, for the position between these two rivers from Fambridge to Cold Norton is strong, and easily held at its inner extremity, where it is about 3 miles wide,—moreover, it is only 35 miles from London. The Camp at Colechester would be turned,³ and the 12,649 Militia and Volunteers of the three Coast Counties thrown away from the Capital; then too Purfleet, with its Powder Establishment, would be at their mercy.

On this side too then positions would have to be marked out and manned;—but where are the men? and where are the Position Guns? Upon this side it is no question of a *mobile Force*; it is a question of men. Men—after all the first and most important requisite of an Army: and we have seen what is our available supply of trained men.

No doubt we could improvise submarine mines at short notice and in large quantities, but submarine mines are useless without submarine miners, and without guns and boats to protect them. We have seen that the Naval Force available is 6 Coast Defence Vessels, 64 Gunboats of sorts, and 56 Torpedo-boats, supposing we employ

¹ Of these 872 are Volunteers.

² Of these 91 are Engineers.

³ This Camp should be intrenched.

here, in our own waters, this all our available Force, but no doubt at least half would be required for Foreign Waters, and there are 300 miles of coast line between Selsea Bill and the Wash to be protected; 1 Coast Defence Vessel and 5 Gunboats per 50 miles of coast, with only three places in which they can take shelter, viz., Dover, Harwich, and the Thames.

But these Coast Defence ships and boats are for the protection of the whole of the Coast line of the United Kingdom—a line of 3,000 miles; how many, think you, can be spared for this 300 miles?

With regard to this Coast Defence Flotilla very hazy notions seem to prevail. Most of those to whom I have spoken on the subject have fallen back on vague generalities, such as Torpedo-boats and Gunboats, and Submarine Mines are just the things for the Coast; they are most valuable, but when pressed, they do not seem to have clear ideas of how they are to be used. Of course neither Gunboats nor Torpedo-boats can be employed alone; they must have supporting vessels, and one Coast Defence Vessel and its proportion, whatever it may be, of Gun- and Torpedo-boats if useful against one or two or even more hostile vessels, must retire before the covering Fleet of an Invading Force. And I suspect that the rôle of these craft will be our Coast Defence Vessel with its proportion of Gun- and Torpedo-boats to a Commercial Harbour, where it will lie snug. However, it will serve my purpose if I hereby elicit an authoritative statement from some naval Officer present.

You will have noticed that I have said nothing of our great Military Ports, assuming perhaps that they at least are armed, and like the strong man possess themselves in peace;—but this is not so. I believe I am correct in saying that the approved armament of breech-loading guns is not in them, and that upon the seaside some of our most costly Forts are absolutely *unable at this moment to fight an action*. Yet the Forts have been completed, with the exception of their armament, for seven years, and on the land side—well you can walk round the land fronts and see for yourselves, as I daresay every Foreign Military Attaché has done over and over again.

And of the Garrisons? I have assumed that their present strength of Regulars must be maintained in them; but I will go farther, and will say, take any Port you will, I care not which, that the present strength in it is not at this moment sufficient for the nucleus of a garrison of Militia and Volunteers, and moreover that it cannot be for some time. My impression is that the Secretary of State for War has stated that these great Military Ports will be garrisoned by Militia and Volunteers. You may place these Auxiliary Troops in them, but the Ports will not then be garrisoned: the service of heavy siege artillery requires most highly trained artillerymen, and not only highly trained but with a considerable amount of *local* training and experience which cannot be acquired in a day. Has a drill been devised, say, for the Spithead Forts? My firm belief is that if you beat to quarters at this moment you could not open fire over the whole seafront of Portsmouth; I doubt if you could in six days—I

was nearly writing six weeks. One thing too is pretty certain: no one would know with whom the supreme command vested, Admiral or General.

If we turn to those Commercial Ports which are *defended* (?) what do we find? A Committee which reported on them some time ago recommended a mixed defence on land and on the water, the latter I believe served by local matériel and manned by local men, and submarine miners have been raised in some ports, and arrangements for the provision of boats locally made. So far so good. But who will conduct the defence? Are the arrangements for the conduct of it made? Will they be under the General of the District or under the naval Officer in charge of the particular portion of the Coast? Let us hope that there will be no friction between these two potentates. The recommendation of the Committee for these Commercial Ports must have, I should think, amounted to a couple of millions, but I have looked, and in vain, through the Estimates for any expenditure upon them.

In the event of any Invasion, but especially of an Invasion such as we have had under consideration, viz., upon the South and East Coasts, the absence of an Enclosed Military Harbour or Naval Intrenched Camp, at Dover, would be severely felt: a comparatively small fleet sheltering under the guns of Dover in such a Harbour would be able to operate to the North or the West as occasion offered, and would have its offensive strength doubled; here, too, would be a post of vantage and security for Coast Defence Vessels and Gun Boats.

What is to be said of the infatuation and imbecility of successive Governments? The Harbour—No, not the Harbour,—the completion of it—has been recommended by Parliamentary Committees; urged as a Military necessity by the Military Authorities; demanded by the voice of our Seamen; taken up in apparent earnestness; lightly thrown aside; handed over to the Convict Department to be constructed by Prisoners; in erecting a Prison, for whom as a preliminary measure a considerable sum has been spent;—spent, and for what purpose?—I see nothing in the Estimates of this year for Dover Harbour; and the one arm constructed 10 years ago at a cost of 970,000*l.* exposes itself unblushingly as a Governmental abortion, over which rival Railway Companies and Harbour Boards may have an opportunity of squabbling.

All, and more than all, the military advantages claimed for a Harbour at Dover may be claimed for a Military Refuge Harbour on the East Coast—place it where you will—I care not, so long as it is central—Filey, Redcar, or elsewhere. I, however, prefer Filey. Respecting a Harbour on this Coast, Commissions and Committees have sat and taken evidence, and have issued reams of matter. Thirty years has this matter been bandied backwards and forwards, and the Harbour is *not*—yet if we were invaded on the East Coast—a well-protected Harbour at Filey would be of enormous value to our Fleet, as well as to our mercantile and fishing marine, and upon fish we depend for a considerable portion of our daily food.

We, with our small Army which we cannot increase, should spare no expenditure which will afford facilities for using it more effectively, which will save it and render it more efficient, this saving of men is a great matter. Our men are not only fewer, they are twofold more expensive than the soldiers of other nations, and we must be strictly economical of them; *we cannot afford to throw away a man.*

On the water, we should collect all the fastest Auxiliary Cruisers, and dispose them to watch the enemy's Ports, and to patrol, in pairs, the whole of our Coast Line, maintaining the whole Telegraphic Communication with London and with our Fleets;—we should improvise, making use of obsolete or non-seagoing ironclads, Stationary Defence Vessels for our principal Military Ports and defended Commercial Ports, thereby freeing our Coast Defence Vessels, and enabling them to act together;—we should add to our Torpedo and Gun-Boat Flotilla by the impressment of all boats capable of being converted temporarily for this service (in 1805 we had a flotilla of 660 such boats); we should take steps for removing at the proper time the buoys and lights at the entrance of the Thames and elsewhere, and make ample provision for the defence of the Thames and Medway:—I think there should be a special Thames Flotilla. Many boats, both Gun and Torpedo, will be found in the boat yards of the Thames and should be at once appropriated. Stores of Submarine Mines and Torpedoes should be collected to the smaller Ports which it is intended to defend, and local boats and men should be enrolled, and practised in the Defence they will have to maintain, assigning Rallying Posts to the men who should be parcelled out under Naval Command throughout the Kingdom, the centre of each Naval parcel coinciding with the Military Centre;—lastly, all Districts should be placed in Telegraphic Communication, and the lines of retirement indicated.

On the Land, the Military Ports should be armed and fully equipped, the Submarine Defences prepared and in readiness, and the garrisons made up to their full strength, the due proportion of Regular Troops being maintained.

All questions of command should be definitely settled. The Land fronts should be placed in fighting order, fully equipped and garrisoned, but to them a large proportion of Militia and Volunteers should be allotted, ample use being made of the Artillery Corps of both Services; intermediate fighting positions should be marked out, and the country in advance cleared as may be necessary.

The Commercial Ports should be treated in like manner, but as they will need considerable land defence of a more temporary nature, such defences should be marked out and thrown up by local means, the local Militia and Volunteers being made use of for this purpose;—the Submarine Defence must be practised and the stores for it collected.

Arrangements should be made to enable the Naval and Military Authorities to act in concert;—a clear understanding in this respect is most necessary.

On the Coast Line generally, the points which it is most important to hold possession of should be selected,—all other places should be

rigorously excluded, and this should be made known to them,—the points selected should be few, and such Defensive Works as time allows thrown up for their protection, local Forces being employed as much as possible.

Arrangements should be made for removing rolling stock, cattle, provender, vehicles, and stores,—for breaking up roads, rail and macadamised,—for destroying bridges and tunnels;—the Yeomanry should be called out for scouting purposes, and the General Arrangements indicated to all concerned, Naval as well as Military, so that all may fall into their proper places at the first alarm and without reference to Headquarters.

Fighting Positions in advance of London should be carefully selected, and the Defenders mustered to them; in preparing these navvies should be extensively employed, and the camps at Aldershot, Colchester, and Shorncliffe should be intrenched.

All Foreigners who are not naturalized should be compelled to quit the Kingdom.

To sum up—What have we upon which we can rely when the Storm of Invasion falls on us? Have we men? The men might be sufficient,—if the Regulars were mature soldiers, but this they never can be under present conditions, and as long as the force in England is the feeder of an equal force in India,—if the Auxiliary Forces were efficient and complete in Equipment and Transport,—if our Field Artillery were more numerous, and we had ample provision of Stores and Tools,—if our Garrison Artillery and our Position Artillery were in their places, and manned by trained artillerymen: and if our Great Military Ports were fully manned, armed, and munitioned, and our Principal Commercial Ports were fully defended;—and if ample allowance were made for waste of men, horses and *matériel*.

If we turn to the Navy—Have we Battle Ships sufficient? Some Naval Officer will perhaps say:—Have we cruisers enough? I think I may answer we have not. Have we Coast Defence Vessels, Gun Boats and Torpedo Boats enough? I have no hesitation in answering, —We have not half enough;—in calculating these very liberal provision must be made for the Defence of the Thames. Have we men enough? Again I say we have not; I am aware that there is difference of opinion here, but I take Admiral Ryder's view, and think arrangements similar to those which prevail in the French Service should be devised for passing annually a certain number of men of the Mercantile Marine, through the Royal Marine. Some say that the number of seamen enrolled is sufficient to man all our ships including both the reserves. My calculations do not bear this out,—but at any rate I feel sure that if I am wrong the number of Seamen in Her Majesty's Navy does not make a sufficient provision for waste, and I would increase the Naval Reserve, and raise a Sea Militia to be employed locally. Local effort should be encouraged everywhere.

Shall we ever have these things, which we have not, and which we ought to have?—Never, so long as our organization is what it is. The self-put questions with which I started need no replies from me.

Have we an organization upon which we can rely?—You, who have heard me, can answer each for himself. What is our state of preparation?—You, who have heard me, know. I recollect General Collinson, who had given much time to this matter of invasion, quoting in this theatre a maxim of that wise old soldier, Sir Henry Harness, that “the War Minister of the day should be the Strategist of the Empire, and that the units he deals with should be fleets and armies.” Has any one here present ever seen such a War Minister? I have never got beyond dreaming of such a War Minister. I have dreamt of a military Utopia where the Secretary of State for War and First Lord of the Admiralty were rolled into one. I assure you that together they did not make a very large person. When one General and one Admiral administered the Army and Navy respectively, when in the Army, all branches of the Service were paid alike, by which half the Army Circulars at once died; when merit ruled promotion, when education and examination were less priggish and more practical, when education indeed was considered as a means, and not as an end; when decentralization and liberty of local action prevailed, when to the Civil Subordinates were remitted all questions of buttons and straps and buckles, and when each man knew his work, did it, and was content to do it without interfering with his neighbour; when, in short, the Military Lion lay down with the Civil War Office Lamb.

When in the Navy the administration was not by a number of co-equal and co-ordinate Lords; when one official did not, as I have seen stated in the daily papers, draw a high salary for doing nothing, while other officials drew low salaries for doing everything. When the Marine Artillery were put to the duty for which they were educated, that is, the handling of guns; when,—but I am not familiar with naval matters, and I was so startled by the other things of which I dreamt, that I turned uneasily, and turning, woke. I dreamt this last night, and to-day,—well to-day is as yesterday. It is too late for much reform to-day, but to-morrow, yes,—we may do something to-morrow; how much we do must depend upon you, and those you influence.

The CHAIRMAN: Gentlemen, I stated in my opening remarks that unfortunately I should be unable to remain for the discussion. I am glad to be able to say that Admiral Boys has kindly undertaken to fill the chair. Before I leave I must express my own personal obligations to the gallant Officer who has read this paper to us. No doubt in the official world that word “mañana” is not altogether unknown, and a great many things are put off until to-morrow which ought to be done to-day. If you want to remedy that, to obtain more prompt action, as I have already said, what you require is that some Officer competent in these matters—not a single Officer but many Officers competent in these matters—shall undertake, as Sir Charles Nugent has undertaken in this and in other papers and will undertake in future papers which I trust he will read, to keep “the man in the street” informed of the state of affairs. I cannot say, long as was the list of deficiencies which Sir Charles Nugent read to us, that there was any single one of them to which as a layman I could take exception, and no doubt the enumeration is melancholy enough. I should not like to say a word which would tend to convey the impression that I was in favour of that policy of “mañana”: I wish that all that Sir Charles Nugent has told us of should be promptly and efficiently provided, at the same time, speaking at any rate for the naval service, I think we are moving rather faster than we were. The public opinion of the country was aroused by the

representations which were made through the usual public channels. Largely increased sums have been placed at the disposal of the naval authorities, and certainly we are building much more rapidly than before. I trust we are building vessels which will prove efficient. With regard to the manning of the Navy we are certainly in advance of the position as it was a generation ago. We have organized a naval reserve. I hope that force is a valuable force; I should like to see it largely increased in numbers, and I think with more care, more attention, involving of course some additional expenditure, the efficiency of the naval reserve, which I trust is already not altogether unsatisfactory, might be increased. If that were so, some of the deficiencies which Sir Charles Nugent has pointed out in the manning of the Navy would be provided for. Then when we come to the question of the manning of the Coast Defence Flotilla, we have made a step—a small step, but we have made a step—in the organization of the Royal Naval Artillery Volunteers, and that force has certainly been put upon a far more satisfactory footing by the action taken by the present Government in recognizing it as having an equal claim with the volunteers of the military branch to the receipt of a capitation grant. With that capitation grant and more facilities for instruction, I hope that the efficiency of the Naval Artillery Volunteers will grow as the efficiency of the land service volunteers has greatly advanced in the last few years. These are points which I wish to urge not with the view of mitigating the anxiety of the country—I do not wish that—but to show that we are making some progress, and if we are making some progress, depend upon it we owe it to the exertions of men like Sir Charles Nugent and others who come forward, and without mincing matters tell the country how we stand. I am very sorry I cannot remain with you longer, and I will ask Admiral Boys to kindly relieve me from the duties of the chair. I am sorry that I shall not have the privilege of expressing what I know will be expressed, namely, your hearty thanks to Sir Charles Nugent for his paper.

Admiral Boys here took the Chair.

Major Sir HARRY VERNEY: It is well to consider all possible unfavourable chances, and Sir Charles Nugent has suggested that if we were engaged in war we should very probably have to do with more than one enemy at the same time. That reminds us, that if an attempt is made to invade us, we ought to provide for it at more points than one, including a possible attempt to land somewhere in Ireland; wherever made, it may be only a feint, in order to divert us from the real point of attack, and our forces might be drawn away in one direction, while the enemy is attacking us in some other part of the coast. It is very desirable that we should bear in mind all the circumstances that might prove dangerous to us in case of an invasion. One is that all the nations of the Continent are now generally practised in the use of arms, and that a certain number of foreigners, living amongst us trained to arms, might possibly be organized to unite and attack us, while our attention is directed to the coast. One object above all, which it would be the aim of an enemy to secure if constructed, would be that which I hope may never be constructed, the Channel Tunnel; for, however safely we might possess the sea, if once one regiment of the enemy were able to march through the tunnel and be masters of our end of it, our command of the sea above would avail us nothing. I never thought that there was any real danger of the tunnel being completed until I heard that Mr. Gladstone was favourable to it. I think that he cannot have considered it from my point of view, but his support of it makes me very much more anxious on the subject than before. I do not believe that it would be a matter of extreme difficulty to organize a body of our enemies in this country. We allow everybody to come into our island and to live here; we place no difficulty at all in their way, and it would not be impossible for a considerable force of an enemy to live here, engaged in various employments, tradesmen, waiters, &c., and at a given signal to unite and get possession of our end of the tunnel. I have always thought that there was more danger of an enemy from within succeeding in an attempt to seize the Channel Tunnel than of a force from without. Supposing that we heard suddenly that a small hostile force of four or five thousand men were landed at one or more places on the coast. We should hurry every man we could to the spot, to drive the enemy out. Is it not possible that thereby our force in defence of the tunnel might be diminished very seriously, especially considering how very small is the amount of troops that we have in

England, compared to the large bodies of men found in other countries? I recollect, with regard to the defence of the country, Sir James Hope's strong opinion was that the most efficient would be with gunboats. I have heard him say: "Give me two hundred gunboats, and I will be bound no enemy shall ever land in England;" but he added, "How long would it take to build them and to supply guns?" I also recollect his opinion with regard to the value of a harbour of refuge on the east coast; and as Sir Charles Nugent has foreshadowed, and as was Sir James Hope's opinion, after being Chairman of the Harbour of Refuge Commission, it would seem that Filey is the proper place. The people about Filey are unable to subscribe any large amount of money towards constructing a harbour of refuge there, and this really is one reason why Filey has been so long neglected. My own conviction is, from what I have heard, as well as from what Sir Charles Nugent has said to-day, that there would be hardly anything of more importance to the country on the eastern coast than a fortified harbour at Filey. With regard to the expence of our Navy and Army we must recollect that they form the cheapest insurance that there ever was for the greatest treasure ever amassed in any country in the world. And that if we take the expence of the Navy and Army as an insurance for such an enormous wealth as is found here, it is but trifling with a most serious subject to object to the cost of protection, when we consider what spoil might be gained in this country if ever a hostile army was able to overrun us. What is the expence of our Navy and Army as against such a terrible disaster as that? What ransom would be demanded by two or more armies united gaining possession of the tunnel and marching on London. Sir Charles Nugent has foreshadowed to us that there is very little preparation in this country against invasion. I hope that there is a great deal more than the public know anything about, but one thing is certain, that every commander and every person in a position of authority who would have to act in case of war ought to be forearmed and prepared for it: he ought to be informed what he would have to do, how the force under his command would be employed, and how they ought to be prepared. I am just old enough to recollect the circumstances in the early part of this century, when Sir John Moore commanded in Kent, and when my father for twenty years was Adjutant-General. I remember hearing, though then a child, the preparations talked about. I recollect his saying that the militia was so excellent, the Staffordshire Militia as good as a regiment of the line. I was with him on Crowborough Hill, and he told me the lines of hills that were to be defended between the south coast and London. At that time every magistrate in that part of the country knew where he was to go, in case an enemy landed; where he was to take what force he could command, wagons and farm horses, and carts with stores, preparations of every sort and kind. I recollect his coming home one day from the Horse Guards and saying: "A little old man called on me to-day, and said, 'I have 80 wagons with 8 horses and 2 men to each, and I wish to place them at the disposal of the Government to go anywhere, at any moment, in case there is danger of invasion?' 'Pray, Sir, what is your name?' my father said. 'I am Russell of the Exeter Flying Van.'" Such was the degree of loyalty that everybody contributed all that they possibly could to the defence of the country. At that time we were very much in excess, with regard to our defences, of what we are at present in proportion to those who may be our enemies now, and of those who were prepared to invade us at that time; I believe that Napoleon had 300,000 men at Boulogne, and that we had 400,000 men in this country under arms and ready to engage him in case he had effected a landing. I do think, Sir, that every man who is a candidate for any public employment of any sort or kind, civil, naval, or military, ought to be trained: I believe training would not do any harm to any class in the country. I recollect at that time the city bankers and merchants were many of them volunteers, they were eager to fight and drive an enemy out of the country, in case he had succeeded in setting his foot in it. It would be the same again, but in order that our defence should be successful, we must be prepared, we must be trained. It may be the case already to some extent; but certainly every Commanding Officer of militia or volunteers ought to know exactly what he would have to do in case of war being declared. When it does actually come, there will be no time for preparation. I heard that in six weeks we might be prepared. It would not be six weeks, it would be nearer six days in case of a sudden war. That

is the sort of suddenness we should have to meet. I feel quite certain that the country would be strongly in favour of any proposal that the Government might bring forward for its real defence. There is no sum that could be proposed to Parliament that would not be readily voted if it were certainly required, and if the country were assured that it would be spent so as to secure our safety with the utmost decision, promptitude, and efficiency.

Admiral COLOMB: I venture to think it is proper that a naval Officer should take up the discussion at the point where the lecturer left it. If I had any previous doubts on the subject, they would have been dispelled by the introduction which the lecturer very properly gave. But I wish to draw attention for a moment to the difference in title between what was originally advertised and what is at the head of the paper. In the advertisement there was nothing said about invasion; but I will take the opportunity, if I may, of putting aside that question, as it requires separate discussion. There is a great preliminary question underlying the whole of the gallant Officer's words which should be discussed, and, if possible, answered before we came to any of the particulars in the body of his paper. But before I pass to that, I cannot help making two remarks which have occurred to me during the reading of the paper. The first is, that I have never met any naval Officer who believes that the defence of this country is wholly in the hands of the Navy, as the lecturer seemed to suggest. What I wish to say, however, is this, that I believe the great difference between the way in which military Officers regard this question and in which naval Officers regard it, is that the naval Officer habitually looks at the coast line of the enemy as the frontier of these islands, and that the military Officer habitually looks at our own coast line in that light. The second remark is as to the contrast between the absolute failure of everything military in the country in the form of defence, with the naval state. I do not think I misinterpreted the lecturer. He said that the standing army was so young and untrained that it was incapable of doing much. He spoke of the volunteers as being incapacitated from moving from point to point; they were without the necessary transport, guns, or stores; and last of all he told us, that after all our expenditure and work on fortifications even at Portsmouth, it would take six weeks before they could be made efficient. Now look at the tremendous contrast! Last July what did the Navy do? Without touching our second reserves of seamen, only taking away about half of our first reserves, we put absolutely the whole of our naval force at sea on its old historical battle-field, and it was there ready, not at six weeks' notice, but at five minutes' notice, to do its work. I ask you carefully to contrast the statements of the lecturer with the facts that were under your eyes last July, and to think that there must be some deep underlying cause for it. I have, since I assumed a position of less responsibility and more leisure, taken some pains to ascertain what is going on in the country with regard to this question. I wish to say this, that there is a condition of mind prevalent in the country, which is not the *opinion* of the country, because the other side has not been put before it in sufficient volume to make the country capable of assimilating it. All over the country, in every coast town, in every commercial centre in the United Kingdom at the present moment, there is a sort of propaganda which has set itself up, which is frightening the country into the idea that it is to suffer all kinds of attacks which it has not been used to in previous history. I get a great many cuttings from newspapers all over the country every day on this very subject of coast defence, and I find always the same idea that there are to be, in some way or another, loose squadrons of the enemy, more or less powerful, more or less organized, everywhere preying upon the coasts of the United Kingdom, and especially upon those towns which are situated far up estuaries, that is, those towns which it is most difficult for a naval force to get at. I will instance the case of Hull. I saw in a Hull paper a letter pointing out that the policy apparently about to be adopted in the Humber was a policy suitable for a German, but not at all suitable for an English port. It was said that there were a great many ships going in and out of the Humber on which the great towns of Hull, Goole, and Grimsby lived and moved and had their being. After reading that letter, I looked in the Parliamentary paper to see what the amount of shipping in the Humber came to, and I found it was this, that every year there are 18,678 British ships going in and out, that is to say, that fifty-one

ships every day are passing either in or out of the Humber, and the towns of which I have spoken are entirely dependent for their value upon this very entrance and exit. Then the correspondent pointed out that this being so, the towns on the Humber were busily engaged in closing the estuary by means of submarine mines, which would have the effect of making the entrance and exit of those ships much more difficult in war-time. It was pointed out in the letter that this must be preparatory to adopting the German policy; and what was the German policy? It was to abandon utterly and absolutely the whole of its sea-borne commerce during the continuance of the Franco-German War. Germany put out all its lights, removed all its buoys and beacons, and the expression was, "It sowed the mouths of the harbours with submarine mines." To my great surprise the reply in a leading article in the paper was, "Yes: that was the policy which it was proposed to adopt in war in the Humber." When I ask myself, how is it that this extraordinary fear, which is unhistorical and which does not seem to have any definite basis, has arisen, and whence has it arisen? it seems to me, in part at least, it has arisen from the constant discussions that have been going on as to the defence by land fortifications of our coaling stations and our naval bases; and that having accepted the policy of this land defence for these bases of operation, by some confusion of mind there has been a transference of this idea of fortifying the naval bases to fortifying these ports and those interests which the Navy is especially placed on the water to guard. Lord Harris, for instance, at Hull, quoting Sir Charles Dilke, said: "The arsenals, dockyards, and coaling stations must be armed with efficient fortifications and with the most modern guns, in order that the fleet may be free." Quite so. The Navy would require its bases; it must work from bases, and it would wish its bases to be free. It is held to be cheaper that the defence of those bases should take the form of land defence. But Lord Harris goes on, and you see the confusion of ideas at once:—"That is perfectly true; *our coast should be armed with efficient fortifications and with most modern guns, in order that our Navy may be free.*" Free to do what? Free to neglect the duty which it has always done, always since the laws of naval war assumed any sort of shape or consistency. That is not the naval meaning of recommending land defences for the bases. It seems to me to be a different proposition altogether. In the same way, Lord Armstrong, in seconding the Address to the Crown in the House of Lords the other day, so far as I understand him, kept the same view. And yet Lord Armstrong has made himself so thoroughly acquainted with both sides of the question, that I can hardly believe that he actually used the words with the meaning which they seem to me to bear. He said: "At the present time he believed that there was not a commercial harbour in the United Kingdom that was not at the mercy of hostile cruisers, unless watched by a ship of war, *which could be ill spared in time of war.*" What on earth, gentlemen, is the Navy for, if it is not to do those very duties? I am not going to say how, I am not going to say whether a ship of war should be off such ports; but what will the Navy do if it does not do what it has always done, that is, protect the ports and commerce passing in and out of the ports? There is another reason why the question has taken the particular form which it at present holds, and that is, the extraordinary rise in volume of the military voice in the country, combined with an equally extraordinary fall in the volume of the naval voice; and my military friends will quite understand, I hope, that in any remarks I make of this kind I am by no means finding fault with them, I am only putting forward those circumstances under which we live, that the military voice in the country is by force of circumstances very much larger in volume, very much closer to the ears of the country than it is possible for the naval voice to be. Let me give you a single fact in illustration of that point. In the year 1817, which was the first year after the close of the great wars in which this idea of defence by the method of scare, if I must use the term, took its rise, in that year, if you will refer to the Army and Navy Lists, you will see that the naval voice was to the military voice as one to two, but if you will take the Navy List of the present year and the Army List, you will see there that the naval voice is only in the country as one to five; and not only that, but the great mass of the naval voice of the country is abroad out of the way; it cannot make itself heard; it cannot get its views of this great question put before the country to the same extent and with

the same vigour which is displayed by the military voice. Now the whole of what we have heard to-day, the whole of the attacks which have been pictured to us depend entirely upon one thing, they depend entirely upon the idea of the loss of the command of the sea by England. I believe that there is no other way of approaching a question of this sort except by the historical method, and when we go back to naval history we see that never within the last 300 years were those attacks made unless the command of the sea was lost. If you go to the West Indies, from the years 1779 to 1781 you will find the condition which is really assumed for England now. We had possessions in the West Indies, and the French had also possessions there; the two fleets, broken up sometimes, sometimes concentrated, were acting against each other, neither in command of the sea. What was happening there? Sometimes one fleet got the better, sometimes the other, and the result was that the kind of attacks which have been supposed to-day were developed, because there was no command of the sea to check them. But, on the other hand, not a single one of the military preparations, either by the French or by ourselves, were of the slightest use. If the French fleet got the command of the sea they took the islands within that command, military defences notwithstanding. And if the English fleet was in power it took them back again, and so on. A couple of years later in the East Indies you may see precisely the same thing, but you never see these territorial attacks in naval war unless one Power has lost the command of the sea and the other has gained it. You may say that this has all passed away, because our ships are now propelled by steam, and not by wind. But we have had several steam wars since then, and we see precisely the same thing; the Crimean War was a steam war. What happened? We had absolute command of the sea, and our coasts were inviolate, while we attacked and captured those of the enemy. Go on through the other wars; go to the American Civil War, for instance: what had you there? You had the Federals with the absolute command of the sea attacking and capturing Confederate ports, but never Confederates attacking Federal ports. Now what is the real state of the United Kingdom? Let me refer to another part of Lord Armstrong's speech, because it is described there with a terseness and clearness that cannot be easily surpassed: "We had hitherto retained," he said, "our ascendancy on the ocean, and it was a matter of life or death that we should continue to do so. If we lost it, our nation would be in the position of a beleaguered city with a community living on half rations, with the certainty of being eventually starved into submission, and of having a war indemnity levied on us, the amount of which would be proportionate to our ability to pay, rather than to the justice of the demand or the clemency of the conquerors." Now Sir Edward Hamley and I were not quite agreed on this subject, but I venture to quote Sir Edward Hamley as having a very clear view of the main position, which Lord Armstrong puts so well. Sir Edward Hamley said: "We are absolutely dependent for existence on these supplies," the supplies that come over sea, "to exclude which would of itself suffice to compel us to accept any terms that the enemy might offer." Now that is our real position, and we have not heard one word to-day of what the gallant lecturer is going to do about these supplies. I will give you one or two figures, which I think will convey some idea of the state of things. Every year in registered British shipping alone, which does not include the whole of the shipping, we have passing in and out of our British ports 614,000 ships, that is to say, there are 1,700 ships going in and out of our ports every day; but, for all the lecturer tells us, we are to go on and do our best without this life-breath on which the country exists. One of the puzzles to me in considering this question is, that this growth of our dependence on the shipping is recent; it was not always so. In the old days we were not nearly so dependent on our shipping as we are now. But now, while the authorities with their lips agree that we are absolutely dependent upon it, they do not develop the growth of naval force in proportion; on the contrary, we have the diminution of naval force, but we have an enormous growth of military force. We have raised the Army Estimates from the 9,700,000*l.* at which they stood in 1847, when we first began to regard our own coast as our frontier, to the 20,000,000*l.* odd at which they stood last year, when we are entirely committed to this defensive frontier. These questions are, I believe, partly financial. Naval men are apt to regard the 34,000,000*l.* which go on our war forces as

probably sufficient, if properly distributed. Military men seem to look at co-ordinate increase of Army and Navy Estimates as legitimate, and the fund from which they are drawn as somewhat illimitable; it is merely a question of drawing it out of the country. What is the state of things? We have about 100,000 men of the regular Army in England at present, and we are spending 20,000,000*l.* Am I wrong if I say that 9,000,000*l.* of that 20,000,000*l.* goes upon the idea of the defence of these islands, and not upon preparing the regular Army for the work it will have to do abroad? And this brings me to the question which the lecturer put forward, and which is a platitude always put forward in these lectures, that is, the disappearance of the fleet. It is always assumed before we begin these discussions that, in some sort of way, the fleet is to go, and you must observe that "fleet" is always used in the singular; it is never fleets. There is always the idea that there is a single mass of ships somewhere, which will disappear in some mysterious way whenever these attacks may be contemplated by our enemies. I think the lecturer in the few remarks he did make about the fleets, although he was obliged from the nature of his position to dispose of them, showed a consciousness that he really does—only it was not in his brief—understand the actual nature of the disposition of the fleet, that there is no such thing as "the fleet." The fleet is the Navy. In warfare there would be no such thing as one fleet; there would always be a grouping of the ships in different fleets as they were wanted. Time does not permit me to do more than to say this, that in old times we depended always on regarding our frontier as the enemy's coast. That was the first thing; but we did not altogether depend on one fleet actively engaged in blocking up the enemy in his ports; we generally, in fact almost always, had a reserve fleet at home. Besides this reserve fleet at home, we usually endeavoured to have as far as we could a chain of lighter cruisers off the mouths of the home ports, and we were then able to assure ourselves of the absolute safety of the country, because if it did happen in the days of sailing vessels (but it is almost impossible that it can happen in the days of steam), if an enemy's squadron did evade one of our squadrons watching it, and attempted to make its way to England for purposes of mischief, it knew before it started that it would most likely find a reserve squadron there, and as a rule it thought better of it, and did not come near these islands of ours. My views on defence are of this kind: they have been forming in my mind for a long time, and by the kindness of the Council I shall fully raise the question again after Easter. But I formed these views in my mind without knowing what very high authority I had at my back. It is only within the last year or two that I have discovered that the views that I hold run absolutely parallel with those of Lord St. Vincent, the greatest sailor-statesman that probably ever existed in the world.

Mr. SEYMOUR SMITH (commanding Royal Naval Volunteers): I will not venture for one moment to criticize the military details of Sir Charles Nugent's admirable paper, but I should like to comment upon its general tone which appears to me to be somewhat despondent and sorrowful. He laments, it seems to me, the ignorance and apathy of this country and of the Services on the great question which he has brought before us to-day. Now, Sir, ignorant we may be, but surely not apathetic! We have been told to-day that there are more than 200,000 citizens who have willingly enrolled themselves as soldiers without emolument and without hope of reward, and he and other distinguished Officers have told us that they are more or less efficient and valuable, in fact, I think we may safely say that more attention perhaps of recent years has been paid to the volunteers than almost certainly to any other part of the Army. But these are not apathetic, do not properly belong to the defence forces of the coast. I should like to be allowed to call attention to the efforts already made by the inhabitants of our coast towns to make themselves efficient in any scheme which may be evolved for the protection of the coasts, and to be employed as Sea Fencibles; that body which Sir Charles Nugent is so anxious to see reorganized. These men, if not exactly to be called seafaring men, at least have that love of the sea and that aptitude for sea service which Sir Charles Nugent so highly approves of in our neighbours the Dutch. I am not speaking of the Royal Naval Reserve, because that highly expensive and possibly useful force, if ever called out, I apprehend will be employed as a reserve to man the seagoing ships of the Royal Navy; but I refer to the Naval Volunteers, who have been raised by an Act

of Parliament expressly for the purpose of forming a force available at a moment's notice for coast defence, and who have for some years endeavoured to train themselves for such a service. I hope there may be some naval Officer present under whom the Naval Volunteers have served, who will bear me out in saying that at any rate they do possess a love of the sea, an aptitude for sea service. That more men have not been enrolled than those now belonging to London, Liverpool, Bristol, and Glasgow, is rather surprising, but I may assure you, Sir, and this meeting, that it is not on account of any want of zeal on the part of the inhabitants of other coast towns, for in most of the large commercial ports, especially those on the east coast, which Sir Charles Nugent says is most essential should be defended, a large number of men have from time to time come forward and offered their services, and are now anxiously awaiting official permission to train themselves in any way that the Admiralty may see fit, so that it be for service afloat. Why their services have not as yet been accepted would astonish us, did we not accept the doctrine that there is no official scheme for utilizing them in the event of necessity. But there have been rumours lately that there really is an Intelligence Department of the Admiralty, and if this be true we may live in hope that this zeal and this love of the sea may yet be utilized. Now, Sir, I would like to refer to one other fact which I think may convince us that the country is not apathetic on this question. There is a modest association with its headquarters in London, the "Naval Volunteers Home Defence Association," whose president is Lord Cowper, and whose Council is composed largely of distinguished naval and military Officers who are keenly alive to its importance, and who approve the methods and labour zealously to promote the objects of that Association. Now among those distinguished Officers are several who have held high official positions both in the War Office and in the Admiralty, and those men cordially endorse the action of the Council and of the Committee: whatever their action may or may not have been, or when in a position of responsibility, I think it is encouraging to know that "behind the frowning providence of office there shone the smiling face of private approval."

Captain J. C. R. COLOMBO, M.P.: The remarks I shall venture to offer upon this paper will be very brief. I so cordially endorse what has been said by my brother, that it is hardly necessary for me to say very much. My views are well known, but feeling as I do the almighty importance of this question, and particularly in its bearings as dealt with by my brother, that though he has anticipated an expression of my views, I venture to intrude myself into the discussion for a few moments. In ten minutes it is absolutely impossible to follow the gallant lecturer into the labyrinth of details and the wilderness of alarms that I find in his paper. I think, Sir, that half our difficulties with regard to having a scheme or system of adequate defence arises from the fact that the public mind is in a fog. We have discussions in the House, discussions in the Press, and in the Institutions, over portions of the question, but it seems to me that somehow this nation has lost the power of grasping great and wide national principles of defence, and therefore I consider that in all these discussions, especially in discussions carried on within these walls, which is the home of the experts, it is of the utmost importance that in all our discussions and meetings we should endeavour to fix upon and elucidate some principle, and see if we ourselves can agree upon it or not. It is only in this way a healthy public opinion can be produced. I would preface the brief observations I make on that point by saying, that so far as I am able to gather broad features from the lecture before us, it indicates three general propositions: the first is that our administrative system under which defence is to be provided has failed, the second is that our naval and military arrangements are in confusion; the third is that we are not prepared to resist successfully sudden attack. Well, it is hardly necessary for me to say in this Institution that, personally, I cordially agree to these three propositions, but the practical question is, how is the evil to be cured? I think there is only one answer to that question, and it is by the force of intelligent public opinion being brought to bear upon main issues. That being so I go further, and say the experts, those who are before the country as experts and authorities of both Services, cannot altogether hold themselves free from blame, if public opinion is as it is, for I do venture to say, looking back even at the Journals of this Institution, that you cannot from those Journals at all clearly understand whether naval and military experts

themselves are agreed upon main issues or primary principles, and the main, fundamental, and primary principle is this, whether our greatest and primary national danger in war will be on the water or on the land. That, Sir, is the question which dominates all others, and I take the teaching of this paper to be that while very vaguely and indistinctly admitting that there may be great national danger on the water, still we may leave that largely to chance, and may settle down to dealing with the details of protection on the land. I most strongly protest against that doctrine. Until you have settled what and where your main danger is, you cannot settle your national policy of defence for it; you cannot do it, and the country will refuse its funds and will draw its purse strings tighter the more they see confusion and conflict of opinion among the experts. I need hardly repeat for the hundredth time that I range myself on the side of those who say that investment is a greater danger to England than invasion; and I repeat once more that invasion is only possible when investment, partial or complete, is almost certain, and that when that condition of things has arisen by which all commercial transactions, which are the life-blood of this nation, are stopped because your fleet has mysteriously disappeared, been beaten or insufficient, then I say the enemy would be mad to invade you when he can accomplish your ruin without landing a single soldier. Invasion is only possible where investment, partial or complete, is a fact, and all arrangements which secure you from investment, partial or complete, are arrangements which secure you absolutely from such an invasion as the lecturer so calmly contemplates. Sir, that is my main contention, and I should very much like to see a meeting called at this Institution of naval and military experts, and to have that question put finally and simply before us and voted upon, because the country will only give a certain amount of money for defence, and it will be the more parsimonious the more excuse it has, and the greater excuse it has for being parsimonious will be this, that the experts cannot agree on the most simple and common sense main issue. Well, that is briefly but very strongly my view, and I cannot look around me at what is now passing on the Continent without feeling that all those who lift up their voices here or elsewhere on the subject of defence incur a very grave and great responsibility, for which posterity will hold them responsible, if they confuse the mind of the country by shirking their clear duty to define and elucidate main issues. In conclusion, I wish to ask Sir Charles Nugent two or three questions which, if he can answer them, will help to some extent to turn the mind to consider the main issue which is this, what is to be the fundamental principle of British defensive policy? I wish to ask him as a distinguished military authority long associated with the War Office, are we to understand from his paper that no invasion is in his opinion to be apprehended save by a force equal to the task of marching upon and seizing London? The next question I wish to ask is, is it not the case, that we have roughly nearly half a million of men in this United Kingdom maintained for the express purpose of preventing that march, and not available for service abroad? Thirdly, I would like to ask him what is under these circumstances the numerical estimate of the invading force; and fourthly, what is the transport required to carry that force across? Fifthly, from what ports abroad he considers this force could start? And sixthly, what is the average carrying power available usually at those ports and under the flag of the Power owning the ports? Next, I would like to know if he asserts that sufficient transport for the estimated invading Powers is always at these ports, and at the disposal of the nations owning those ports, and if not how long will it take to collect the carrying power at those ports, and what is the data and basis upon which he calculates that element of time in its collection. These are some of the A B C questions I at all events have been endeavouring to get an answer to from purely military experts for some twenty-two years, and I have never had an answer to them yet, and I say do not blame Parliament, and do not blame your statesmen for apathy if experts who cry "Invasion" cannot answer these first fundamental questions.

Admiral Sir GEORGE ELLIOT: I will not presume to offer any remarks with regard to the question of land defences after what we have heard from Sir Charles Nugent; I am not competent to do so. But I think he will excuse me if I venture to point out one blot in his lecture, as he has mentioned some points connected with naval defence. First of all, we look at the chart and Filly Bay; we see an

anchor which represents a harbour of refuge, and a most important harbour it would be in war-time for the defence of the coast. I see an anchor also at Milford, another at Portland, and another at Lundy Island. Now I am sorry to see no anchor at Scilly, because I look upon the Scilly Islands as a most important outpost and harbour of refuge in war-time for this country.

Sir CHARLES NUGENT: I ought to have explained that map was for quite a different purpose, and these "anchors" you speak of have nothing to do with this lecture.

Sir GEORGE ELLIOT: You have mentioned Lundy Island in your lecture.

Sir CHARLES NUGENT: I did not deal with that coast.

Sir GEORGE ELLIOT: I thought you dealt with the south coast and east coast.

Sir CHARLES NUGENT: I did.

Sir GEORGE ELLIOT: That is the most salient point of the south coast.

Sir CHARLES NUGENT: The south coast from Portsmouth only.

Sir GEORGE ELLIOT: Well, you are fortunate in leaving off there, as unless the Scilly Islands are fortified as a coaling station, all the cruising vessels in the chops of the Channel, where they will be looking out to protect our commerce, will have to come to Portland to get coal. Scilly Islands is one of the most important stations connected with the defence of this country, and in all former wars were strongly fortified and garrisoned, and now I think there are only two old guns lying somewhere in a ditch. If an enemy got possession of Scilly Islands, it would very quickly be defended by torpedoes, and to a certain extent it would be a great danger to the country. If you go further on another occasion, I hope you will not forget Scilly Islands.

Lieutenant-Colonel WETHERED: Sir Charles Nugent deserves the thanks of the meeting and the country for having brought this subject before us. I am very sorry to see by the discussions which have taken place that we are not the amphibious body I had hoped we might be. As far as I remember, though I cannot say I have followed very closely the lectures that have taken place here, naval men have brought before the meetings the insufficient state of our Navy, and given most minute details of the ships composing our Fleet and the manner in which other nations were creeping up in their strength, especially the French, showing that they have gone up very nearly equal to that of our Navy, and I would ask, supposing there is a combination of two Powers, say France and Russia, what would be the result? Consider what our Fleet has to do. We have not only our Colonies to guard, but we have that great and important thing, our commerce, to protect. So long as our Fleet has command of the Channel, we should not be in much danger of an invasion; but I want to know whether such a combination as may arise might not cause an investment of our country. Considering the enormous work our Fleet would have to do, I think the idea of the lecturer and of all military men has been this, that we should, as far as possible, allow our Navy to be unencumbered by having to defend our coasts; that the Fleet should be left free to strike a blow at any given point, to blockade the enemy's ports, protect our commerce, and watch our Colonies. Surely that is work enough for our Navy, however much it may be augmented on an emergency; and we in England as military men would like to feel that we could defend our sea-girt island independently of our Navy. Our isolated position affords every advantage for defence, but I do not think we have any organized plan or arranged system of defence; any means whereby we could concentrate a body of men on certain strategical points of our coast would be a great advantage. We neglect the means that our railway and telegraph systems give us. Our railways afford very great opportunity for concentration of men and material, and there is no doubt the railway lines themselves, previously supplemented by branch lines to strategical points of our coast, and if heavy guns were mounted upon suitable railway gun-carriages, could be fought from the railway metals with great advantage. My idea has been, that we ought to have fortified centres around and within certain distances of London as our base of operations, where we could accumulate a large force of guns, artillery, and material of every kind, which might be dispatched to any part of the coast to defend our shores. With regard to our Navy, suppose we have our cruisers out watching the enemy's ports and ships, some of our fast vessels would have to run

in and communicate with the shore; but what advantage our telegraph system would afford us if it were properly carried out! Why should we not make provision for having our lightships (and other vessels anchored at extended distances from the coast) placed in telegraphic communication with the coast, so that our cruisers could communicate from these telegraph posts what was going on on the opposite coast. This would be a great saving of time in communicating with the shore, and prevent our cruisers leaving their cruising ground. I quite agree with the lecturer that we shall never accomplish anything, talk as much as you like, until we have some experts placed at the head of the different branches of the Service. To place a civilian political Secretary for War virtually at the head of the Army, who does not profess to be an expert, is suicidal. The Secretary of State has permanent officials who are experts in numerals, but whether those figures represent effective men, horses, and guns or not, is of little consequence from their point of view, so long as they can manipulate their estimates and returns to keep the country quiet. The money granted for army service is not expended advantageously. Look at the great increase that goes on in the cost of the Administrative Staff of the Army. In a few years it has nearly doubled, without any corresponding increase in the bulk of the Army.

Major E. GUYER: In common with all my brother Officers who are interested in their profession I feel grateful to Sir Charles Nugent for bringing this most important question before the authorities and the public, and especially, locally speaking, for his remarks regarding the requirements of Dover. There is one statement, however, in his lecture which I do not like to pass by without some perfectly respectful comment. In speaking of the advanced positions which would have to be drawn up to check the march of an invading army on London, he says that digging and shovelling would be required, that these things require practice, and that for this purpose the infantry of the line would be useless. Now I venture to say that if Sir Charles had been down in the south-eastern district during the past year, he would not state that infantry of the line were useless for that work, for a great deal has been done by the infantry. I will not venture to go into the larger part of the question, but this much I say, that Sir Charles would be astonished to see what work the infantry, instructed by their Officers, have done in this matter, and he would be surprised at the interest that the men themselves take in it. I do not speak of mere humdrum digging and shovelling, but of what we may call the more picturesque part of the work, the weaving of the beautiful (though somewhat brittle) brushwood, the laying of the symmetrical sand-bag. All this has its charm for the soldier, little as you may think it, beyond the routine of his daily work, and I hope I may say we are doing our best to instruct the men in this most necessary and useful work. I should not like it therefore to go forth as the dictum of so able, experienced, and influential an Officer as Sir Charles Nugent that the infantry, with the exception of a few regiments, are useless for this work. At the same time I may venture to say a word also on behalf of the volunteers. Last year three battalions of engineer volunteers went down to Dover for the Easter Manœuvres. I don't know whether Sir Charles was there. If he had been I think he would have been very pleased to see the work done by the men in this very way, in hastily preparing a position for defence.

The CHAIRMAN (Admiral Boys): Before asking Sir Charles Nugent to reply, I have just two points I should like to refer to in reference to this lecture. One is the comparative strength of the Navy—what it is now and what it was when we were last engaged in a naval war—in view of the additional duties that it would now have to perform. In the year 1799 there were at one time lying in Torbay fifty-four line of battle ships and there were eleven more coming round from Plymouth to join them. That represents a fleet that we could not put together at the present moment, and yet what we have to do now-a-days in protecting our commerce compared with what was required, they might be multiplied by six or seven. With reference to the state of unpreparedness now existing as stated in this lecture by Sir Charles Nugent, if I do not agree with the whole of it, there is no doubt an immense deal of fact produced, I think it is derived to a great extent from our system of party government. For many years there has been no continuity of naval policy. Whenever there was a change of Government, what the former

Government decided on, the new Government coming into power, found all wrong, and the great object was for the Government to frame its estimates for the Services more with regard to a reduction of those made by the Government preceding it, than for efficiency. I must say, however, this has not been the case lately. I will now ask Sir Charles Nugent to reply to the discussion that has taken place.

Sir CHARLES NUGENT: Admiral Boys, ladies and gentlemen, as I listened to the naval gentlemen who have commented upon the paper, I began to think I had done something very wrong, and my first impulse was to go out by that door. Thinking upon it farther, however, it occurs to me that our difference mainly lies in this, viz., that we start from different points. No doubt there is an alteration in the title of this paper, it was made by me at the last moment, but made in innocence, not supposing that it would bring a hornet's nest about my ears, nor do I think it need have done so. Sincerely as Admiral Colomb has spoken, I feel my shortcomings the more, inasmuch as he is supported by his brother, who is a great authority also. I will endeavour to set myself right, but really at this moment I do not know from what Admiral Colomb says whether he considers that the Navy with its present strength is sufficient of itself for the defence of this coast line.

Admiral COLOMB: Certainly not.

Sir CHARLES NUGENT: Then if it is not, I cannot see any reason why this country is not liable to invasion. I start with that. Take the next point, Admiral Colomb says that properly we should consider our enemy's coast line our frontier. Why should not our enemy treat us in the same way? and may he not do so? For I have heard naval Officers of great experience say in this theatre, that the French Navy is equal to our own, and some of them have even said it is superior to our own, and then I see no force in the argument, because if the opposing party who considers that our coast line should be his frontier is stronger than we are, I think that our position is not bettered by the Admiral's view.¹ It is impossible in the little time which remains to answer all the points raised, but the Admiral has said he means to raise them again after Easter. I shall be very happy in a friendly way to meet him, and endeavour to arrive at some joint understanding upon this great question. There is a point, however, which he mentioned, to which I think I should refer. He said, and he won't mind my remarking that I thought there a little feeling was manifest in what he said, that the Army got so much and the Navy got so little—indeed, he said that out of the 19,000,000*l.* voted annually for the Army he believed 9,000,000*l.* were spent on fortifications.

Admiral COLOMB: No, defences.

Sir CHARLES NUGENT: Land defences.

Admiral COLOMB: Not necessarily.

Sir CHARLES NUGENT: Well I am glad we have cleared this up, because I understood the Admiral to say, referring to the Army, that it was spent on defences. However, I do not agree as to the amount. As far as the Military Estimates are concerned I cannot make out that more than 150,000*l.* was spent upon defences during the past year.

Admiral COLOMB: As there is a misapprehension I may be allowed to put it right. Historically the standing army has always been the attacking force of this country, not the defending force. It consists of 100,000 men roughly. 20,000,000*l.* are spent on the whole army. Now I cannot conceive that more than 9,000,000*l.* or 10,000,000*l.* are spent upon the 100,000 men that are properly the attacking force, and if we had war with the two countries which are most likely to unite against us,

¹ In those times, when our enemy's coast line was our frontier, if my memory serves me, and I have no books of reference by me, the enemy's coast swarmed with lugger-rigged boats, of great size, carrying large spread of canvas, numerous manned, and heavily armed, which in spite of our cruisers on their coast line crept across the Channel, taking advantage of calms (when they used oars) and fogs, and cut out our merchantmen in our own waters, indeed the loss of vessels in our own waters was of daily occurrence; notices were posted at Lloyd's, and the rates of insurance ran up enormously—indeed, I am not sure but that the underwriters contemplated declining insurances in some cases altogether.

the whole of that 100,000 men would have to go to India. What I mean is that the rest of the military force is necessarily a defending force, part of it fortifications and part men, and so on, but the other 9,000,000*l.* appears to me to go for that defending force.

Sir CHARLES NUGENT: The Admiral further reproached me with having given you old platitudes. That you have heard very often before my view of the matter is quite true. I have said a great deal of this before, and I am only sorry to say that the matters to which these platitudes refer are so much worse than I thought they were. I join issue with him at once about the fleet. Of course I do not attempt to set my authority against his with regard to the Navy, but I do distinctly say, that the Navy as at present constituted has something else to do besides the defence of these shores. If you take the Navy you find that we have certain ships, gunboats, and other craft called coast defence vessels. Well, if I understand what a coast defence vessel means, it means something set apart for the defence of the coast. Now looking to the fact that our coast line is about 3,000 miles in length, and that the whole coast defence lies in that small force of which I gave you the numbers, and which numbers no naval Officer here present has challenged, then I say that the coast defence force is utterly inadequate to the purpose for which it is set apart, that you might almost as well throw it into the water. That is my view of the matter. Then with regard to the Navy, the gallant Admiral quoted history. Of course you cannot get over history; still I have no objection to the historical method: let us go to history, and in history I find that in 1786 Pitt, the *Primo Minister*, and having the best means of knowing, said that owing to the want of defence works for the capital, as well as for our shores, our Navy was set to do work *it had no business to do* in carrying on a defensive war, wasting our resources and impairing our strength without benefit. It is almost impossible to follow all the points, but the Admiral's best point was that the general tenour of my remarks was to show that after all this the military expenditure was worth nothing, and that, although we have a force of some half a million men, that we have this force in vain. Well, the whole point of my paper was, not that we have not enough men, but that our organization is such that we could not immediately use these men to the best purpose. I have said, and I say it again, that it is the organization that is deficient. It may be that a better time is coming, and I have heard it whispered that we shall have an organization that will allow us to use them, but as far as I know we have not got it at present, and I hoped, in vain, that some military men having authority would rise and say that we had. I have worked to a *brief*, and the *brief* on which I have worked is the coast line, indeed I am not at all sure that I should have touched the naval part of the question at all, except as far as the amphibious portion thereof is concerned. I have over and over again dealt with the necessity of safeguarding our commerce, and of how much depends on it, but I do not think it necessary for my purpose, indeed I do not think it within the scope of what the Council of the Institution here committed to me, that I should deal with that now. I dealt as I thought with the danger when it approached our shores, and in order to save time and a certain amount of iteration I dealt only with the particular part of the coast line which I specified. Sir George Elliot referred to the Scilly Islands as being a very important place, and he laid it as a fault to me, that I had not brought in the Scilly Islands or Portland. I did not, because they did not fall within this specified part of the coast line, but I could not be ignorant of the value of Portland. I was there some years, and the defences grew under my care; and also in this theatre I have dwelt more than once on the value of Scilly as a lookout point, and of Scilly Islands as suitable for a harbour of refuge. Mr. Seth Smith said I spoke of the ignorance and apathy of the country and of the Services, but I do not think my remarks had direct reference to the Services. Admiral Colomb has shown us that there is a growing feeling in the country which may be turned to good account; nevertheless, the country is to a great extent ignorant; I do not, however, impute to the naval members of the Service apathy, still I think much more might be done than we have done. I did not compare ourselves with the Dutch of the present day so much as with the Dutch of the past, and I think there is a great analogy between the two. Captain Colomb, for whom I have great respect, for he has ventilated these questions even more than his brother, entirely endorsed

all that his brother has said, and he added that he was going to put to me three questions. I thought I could answer three questions, and here are his questions on this paper, and really a competitive examination is a joke to what I have here. Here are eight questions. I will answer the first three of them. I am not afraid of the others, and perhaps at some future time I may have the opportunity of answering them all, indeed I think that there is no difficulty in giving answers now to all of them. The first question he asks is, Do we understand that no invasion is to be apprehended save by a force equal to the task of marching upon and seizing London? Well, I have already answered this in my paper, wherein I start by stating that the object of invasion is London. An enemy may levy a contribution on Liverpool, even take it, if you like, or he may go to another place and do the same, but that in my opinion is not invasion. Invasion has London as its object; I cannot see for what an enemy should come here in force except for London. The second question he asks is, Is not it the case that we have literally some half a million of men available for resisting invasion? Yes, it is the case that we have more than half a million of men available, but from lack of organization, not in a state at present to resist sudden invasion, which is the point of my paper. I see that you have the men, but as far as I can see, and I have no special means of information, they are not ready, lack of readiness is the point I desire to make. Thirdly, he asks, What is my estimate of the force required to invade this country? To that I reply, and I have endeavoured to look at this matter from the *other side of the water* point of view, to that I reply that no ruler in his senses would think of invading this country with less than 200,000 men. We do know that Napoleon started with 135,000 men, but that he increased them to 178,000. Going on, Captain Colomb asks what is the transport required to carry this force over the water, and I think he also asks, from what ports are they coming? Should I deal with this as one of the three questions I have undertaken to answer, I would tell you the ports from which I thought they would come; however, we do know that from Texel to Brest Napoleon did collect in all the ports opposite sufficient transport, 2,290 vessels in all, to convey these 178,000 men, with 432 guns, 14,600 horses, Transport and Provisions, and he carried his preparations so far in these ports—I could give you the names of all them—so far that he could embark the whole force in 1½ minutes, and disembark it in a scarcely longer time from the final sound of the bugles. History tells us that the great Nelson, the unapproachable sailor, was decoyed away by the artifice of the French to the West Indies, and lost a certain number of weeks, three I think, during which time this country lay almost at the mercy of the French. And that Napoleon's project failed was due to the superior sailing of the "Curiena" brig, a brig taken from the French themselves, which brought information to England from the West Indies. If Villeneuve had carried out the instructions of Napoleon, the French would have been in England, and God knows what would have happened to us; and more than all this, I say that the proper way to test this question is to put yourself in the opposite position: well, if I were an autocratic ruler with a million of armed men opposite, I never would rest till I had brought England to her knees. If you have the fighting men it is something worth fighting for, is the supremacy of the sea. Does not every nation in her secret heart, I won't say hate us, but look at us with an envy very much akin to hatred? And why should not they come. I am sure that our present fleet, the fleet which our Admiralty provide for us, is not sufficient to prevent an invasion with prospect of success.¹

Admiral COLOMB: If they are rash enough.

¹ In the beginning of this century we had 115 liners and 308 cruisers, besides a special flotilla for the coast and the Thames, and we had also 90,000 seamen, 30,000 marines, and 25,000 defencibles, and I am under the impression that we had upwards of 700,000 land forces under arms, yet our enemy could not at that time dispose of half the military forces a possible enemy can dispose of now, and it is matter of fact, that we were then open to invasion, although our Navy then had not to do probably one-half of what our present Navy, some 130 liners and cruisers, with half the number of men, has to do now.

Sir CHARLES NUGENT: Yes, if they were rash enough to start, is not sufficient to be relied upon for absolutely preventing them from getting here after they had started. It only remains to apologize to Major Gunter for having spoken as it seemed disparagingly of the line regiments. I really did not mean disparagement, I thought that the line soldiers had not generally had sufficient practice in digging and shovelling, and I still think that the generality of them, those at least who have not had over three years' service, cannot be sufficiently hardened to be depended upon. I do not, however, despise them; I believe that under their Officers they will do all that can be expected of them. In conclusion, let me repeat that my attention was principally directed to the coast line, that the enemy were brought to the coast line by the Council—I did not bring them—and that when they approached the coast line I was to deal with them as I could, and I here endeavoured to show that with the means at disposal it was not so easy to deal with them—at any rate I have not knowingly exaggerated or diminished anything.

The CHAIRMAN: I am certain you will authorize me to thank Sir Charles Nugent for his very able paper, and for the interesting and good-natured though critical discussion which has come from it.