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Publisher: Routledge
Informa Ltd Registered in England and Wales Registered
Number: 1072954 Registered office: Mortimer House, 37-41
Mortimer Street, London W1T 3JH, UK

Royal United Services Institution. Journal

Publication details, including
instructions for authors and
subscription information:

[http://www.tandfonline.com/loi/
rusi19](http://www.tandfonline.com/loi/rusi19)

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Published online: 11 Sep 2009.

To cite this article: Lieutenant W. C. Crutchley R.N.R. (1893)
Modern Warfare as Affecting the Mercantile Marine of Great Britain,
Royal United Services Institution. Journal, 37:183, 491-511, DOI:
[10.1080/03071849309416548](https://doi.org/10.1080/03071849309416548)

To link to this article: [http://
dx.doi.org/10.1080/03071849309416548](http://dx.doi.org/10.1080/03071849309416548)

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Wednesday, February 15, 1893.

ADMIRAL SIR NOWELL SALMON, *Q.C.*, *K.C.B.*, in the Chair.

MODERN WARFARE AS AFFECTING THE MERCANTILE MARINE OF GREAT BRITAIN.

By Lieutenant W. C. CRUTCHLEY, *R.N.R.*

It may, perhaps, be assumed that the interests attaching to this subject are great and far-reaching. Briefly it may be said that our merchant vessels are the great source from which our money-earning power springs, and also that they are indispensable to the efficient food supply of Great Britain. The importance of the subject must be my excuse for again bringing it forward here.

Previous papers have created a fair amount of discussion in this theatre, as elsewhere, and it is eminently satisfactory to know that those discussions have borne good fruit. The opinions here expressed by officers have been acted upon to a certain extent; and it is in the hope of yet further improvement that this subject is again brought to the front.

The points which still possess undue prominence are the urgent necessity for the partial arming of our swift merchant steamers on the long over-sea routes, and, secondly, the necessity of an efficient scheme for the whipping in of our scattered commerce on the outbreak of war, with an enemy powerful enough to trouble us on the sea.

And, as to the probable effect modern warfare will have on our merchant shipping, this will admit of little discussion; the modern gun has been brought to such perfection, and explosives of enormous power can be carried in such small compass, that at all hazards, raiding on our vessels must be brought to an end as speedily as possible, or the consequences to ourselves will be disastrous in the extreme.

This question of raiding on merchant vessels has of recent years been nearly always associated with the name of the "Alabama" and her consorts; it is, perhaps, natural that this should be so, as it was the last example of anything of the sort, but it cannot be considered by any means as a parallel case to an attack upon our commerce now, any more than recent Continental warfare with now obsolete weapons will help us to estimate what may happen in the future. Apparently this estimate is that the next great war will be more destructive and far-reaching in its effects than any which have preceded it; but that inference has to be drawn from past history.

So also with the lesson to be learned from the "Alabama." She was practically a sailing vessel, and so had the power of keeping the sea for long periods of time; also the vessels she preyed upon were sailing vessels, and one other point in her favour was that telegraphic communication was very inferior at that time, which gave her some advantages that it may perhaps be assumed no other vessel will have in future; this latter point must not, however, be lost sight of even now, for a destruction of telegraphic cables would tell against us far more than against any enemy at sea.

Moreover, as the "Alabama" had no base of operations to which she could send her prizes, she elected to destroy them; this may or may not apply to the raider of to-day. For, let our navy be as powerful as we all might wish it to be, it could scarcely be expected to blockade every port in an enemy's country; and it can scarcely be doubted that attempts will be made to take suitable vessels to the enemy's ports, with a view to their conversion and use against ourselves. That is one way in which steam has multiplied the chances of disaster to ourselves, for a vessel destroyed is done with; in the hands of an enemy she is a power for evil.

The great similarity, however, between the "Alabama" and her consorts and the raider of to-day is, that they may all be classed under the head of merchant vessels; then, as they would be now, they were hastily armed and irregularly manned, and, with every advantage against them, they succeeded in ruining for a time the sea trade of America. Whether that country will ever recover its sea trade is a matter which will affect us very seriously, although the mention of it suffices here; but the fact remains that four vessels sufficed to ruin that trade.

And important though that loss was to America, that country was in a vastly different position to that in which we should be under similar conditions; their carrying trade was merely an adjunct to a completely self-supporting country; they could, with no difficulty, manufacture all their war material; they were very far removed from any fear of famine, their country was, in fact, a great deal more than self-supporting; and, lastly, *their empire did not extend beyond their own shores.*

Now, let us contrast this position with that of the United Kingdom, in the event of modern steamers being turned loose to prey on our commerce.

Without any attempt at absolute accuracy, it may be stated roughly that we possess 70 per cent. of the carrying trade of the world. What the value of that trade is to this country annually must be left in a great measure to individual imagination, and it would be very difficult to estimate it with any degree of precision; but it cannot be disputed that at whatever figure it may be placed, it will represent an enormous sum, without which the nation could not meet its liabilities.

In the course of the many arguments which have been put forward on the question we are now discussing, the endeavour has been made to show that the lesson furnished by the Confederate war vessels is one

which does not apply to us, inasmuch as the damage wrought by them was on sailing vessels only, and that our sailing tonnage would be laid up on the outbreak of war. This argument is not a good one, for the laying up of sailing vessels would necessarily throw more work on the steamers. *We alone* possess the steamers necessary to carry on the trade of the world, and in all probability, if we are very hardly pressed, we shall owe our salvation to that fact; for as it is extremely doubtful whether any transfer of vessels would be recognised by a belligerent nation after the outbreak of war, we find ourselves face to face with the conviction that our trading vessels must keep the sea, or our country starves, the trade of the world comes to a standstill, and eventually leaves us for ever.

Of course it is possible, and not unlikely, that if we were very hardly pressed, America would see its way to offer as many inducements to its people to acquire British-built vessels as it now puts obstacles in their way. It is now very evident that they (the Americans) are bent on regaining some of their lost power at sea; and if that were accomplished, by our inability to take care of our property afloat, they would doubtless claim that it was little else than retributive justice.

For the purpose of this argument it will be assumed that, irrespective of hostile men-of-war, which it is presumed our own men-of-war will satisfactorily account for, thirty fairly fast merchant steamers are at the disposal of the Power or Powers resolved upon trying conclusions with us upon the sea. France and Russia combined possess about 1,000 steamers, and taking into consideration the steamers of the Messageries Maritimes alone, it cannot be said that thirty is at all too great a number to assume as being used against us.

These vessels need not be necessarily "Teutonics," or "Cities of Paris," but simply vessels with large coal capacity and, we will say, an extreme speed of sixteen knots; without doubt they would be fully coaled up, and have each, say, four 5-in. guns, and the necessary ammunition and crew.

With nearly three-fourths of the trade of the world to amuse themselves with, the question is, How long would it be before these vessels were caught, and what amount of damage would they have done in the meantime?

In attempting to estimate this, and taking into consideration the damage wrought by the last raiders on commerce, it must be remembered that traffic at sea has increased enormously of late years, and that on certain routes the seas are simply crowded by vessels under our flag.

It must also be borne in mind that these vessels will have a coal capacity which will render them independent of any coaling station, or base of operations. They will be enabled, if necessary, to steam round the world without coaling, and their power for destruction, until they had *to fight*, would be incalculable.

I use the expression to fight, because, were a merchant vessel to chase another armed with a stern gun, she would in all probability receive such damage as would shorten her career very considerably.

With what vessels is it in contemplation to catch them? Have we sufficient cruisers to undertake the business; or is it proposed to do so with the vessels now on the Admiralty list, when they have been taken from their respective trade routes and equipped for that purpose? I scarcely imagine any officer here present will contend that we have cruisers enough of the "Blake" and "Blenheim" type for this purpose. I must suggest that for this work on the open sea large vessels will be required, and they must be able to maintain a big speed easily; short vessels with low freeboard, that will bury themselves in a head sea, are scarcely suitable for doing good work with.

If, on the other hand, it is proposed to catch them with the vessels on the Admiralty list, there will be a terrible loss of time before they can be equipped; and then arises the question, How many will you send, and where will you despatch them to?

To send one ship to look for another which has a roving commission is rather a hopeless task; they (the auxiliary cruisers) would presumably make for where the shipping was thickest, but to my fancy by the time they got there they would find the birds flown to a less frequented part of our terribly long sea routes.

If there is one lesson which has been taught and emphasized in this theatre for years past, it is the value of history as illustrating the probabilities of future warfare; this will scarcely be controverted.

Now the American trade never even assimilated to ours of to-day. It was sailing tonnage only, and neither pursuers nor pursued were capable of rapid movement such as would now obtain; and it will be admitted that increased rapidity of movement will give greater facility for increased destruction, in precisely the same manner that a man with two guns in a warm corner can kill more than with one only. It must be borne in mind also, that the proportion of Federal war vessels was greater in comparison with the Confederate raiders than our own navy and auxiliaries would be with the number assumed as likely to be turned out against us; and then, in looking at the facts as they now are, we must decide what are the chances in favour of our being able to prevent a wholesale destruction of our merchantmen.

But, as has been stated, a merchant vessel engaged in warfare is always liable to receive damage which will disable her if she attempts to chase an armed vessel; this will apply equally to whether one of our auxiliaries chases an armed raider, or whether the raider chases one of our steamers on her ordinary trade route which has been supplied with stern guns.

This latter point was very strongly put by Captain FitzGerald at the Institute of Naval Architects some years ago.

In the recent discussion here on the Naval Prize Essay, it was asked whether, in the warfare of the future, merchant vessels were liable to be torpedoed indiscriminately? I do not think the question was discussed. To a great extent naval officers are interested in the mercantile marine—necessarily so, indeed. But is there not, perhaps, a tendency to trust that Providence will be merciful to it, and to hope

that it may be so? Now the man who has spent a lifetime in the merchant service looks at this thing from an entirely different point of view. He knows all its little peculiarities, and is scarcely content to accept Providence as his sole stock-in-trade when the emergency we are now discussing arises. Knowing, as we all do, that no man-of-war is capable of keeping the open sea for long periods of time, for many reasons (of which, perhaps, want of coal is the principal), he looks with an eye of suspicion on fixed trade routes patrolled by men-of-war as a means of keeping the sea clear of raiders, when men-of-war are not in far greater excess of requirements than we have them, or are likely to possess them in the immediate future.

And it would appear as if this question of the value of protected trade routes as against convoys is somewhat on these lines. Will you endeavour to hold a long line of communication by many weak detachments which are liable to attack by an enemy at any point of the line; or will you not rather, the means of transport being no object, keep a movable column together which is capable of absolute defence against any force likely to be brought against it? I must confess that it appears scarcely to admit of argument.

With a protected trade route it means that from the Polar regions to the Equator we have to defend such a line of communication as has never yet been held, and which is liable at any time to attacks in each and all of its weakest places. To endeavour to do this efficiently with our present number of cruisers is manifestly impossible, and it would be satisfactory, as a test, to send one of them to cruise between Finisterre and Madeira for a month with, say, instructions to steam daily 300 miles without putting into port.

The necessity does not exist for any other nation to have such vessels as ourselves if the protected trade route is to be attempted. The ordinary war vessel is supposed to have fair moving power, and men-of-war of all nationalities are more or less hampered by the endeavour to make them comply with conditions which will suit all and every circumstance; as long as they are opposed to one another this is all right, and as fair for one as the other; but, to efficiently patrol a trade route, they require speed and endurance for an unlimited time, which it is, to say the least, doubtful whether any one of them at present possesses.

It will be assumed, for the purpose of argument—

1. That our men-of-war cruisers at present are not in excess of our requirements for blockade and scouting purposes, and also for keeping clear of enemies the entrance, and immediate approaches, to our home and principal ports; to keep even 50 miles from our shores free of an enemy will be no light task;

2. That there are, therefore, not enough of these vessels to patrol with any approach to efficiency the main trade routes of the world, which must necessarily be traversed by our slower steamers, if it is decided to adopt that plan in preference to vessels steaming under convoy;

3. That, given two merchant vessels of fairly equal speed and ability, the possession of one piece of modern ordnance by one of

them utterly destroys the comparison and gives the unarmed vessel, without hope of resistance, to the other either for capture or destruction.

The first of these propositions will in all probability be accepted. The second is scarcely likely to cause much argument; but with regard to the third and last one, the case is different, and herein lies the entire question; and it is on this point only that any satisfactory settlement of the safety of merchant steamers can rest.

The arguments that can be used against any scheme for arming merchant vessels to take part in their own defence are three only; in its favour there are many, but the adverse ones may be summed up as—

1. The questionable right to fire a shot in self-defence only, or to be in possession of arms.

2. The extra weight of those arms being always carried; this is the so-called shipowners' argument.

3. The want of training and ability on the part of officers and men to use modern weapons in their own defence.

The first of these objections has been argued in this theatre years ago, but never, so far as my knowledge serves me, with any absolute finality. Perhaps, however, by this time something definite has been decided which may be elicited in the discussion which I hope will follow.

To a greater or less extent merchant vessels always have been armed until quite recently; certainly long, or many years, after the date of the Declaration of Paris vessels were well armed that traded to the China Seas; and, speaking from memory, long after that date guns and ammunition were supplied by the Admiralty to vessels which complied with certain requirements. But the astonishing thing is that the larger and more valuable vessels have become, the less care appears to be taken of them, nor are any facilities afforded them in the case of unforeseen accident. Vessels might be mentioned by the score, some of the finest afloat, habitually trading past a coast inhabited by barbarous and hostile natives, and yet there is not a musket on board them, supposing they by any mischance went on the beach and were attacked by natives. That, however, is beside the question, but merely mentioned as showing the indifference with which the entire question is treated. The point to be made is that if it was legal to carry arms in the sixties, and, furthermore, arms supplied by Government, it is legal to do so now; if it was not legal then, the subject would be all the better for modern reconsideration.

As to the second adverse opinion on this matter, or what may be termed the shipowners' argument, it could be dismissed in far fewer words were it advisable to do so; but as it is not, it will receive more explanation, perhaps, than it may merit.

To put it as briefly as possible, and not to go into detail, it will be assumed that 4.7-in. Q.F. guns are selected as the armament for mail steamers, although they are in excess of requirements, as 4-in. guns would be quite large enough; of course the extra bursting charge of the larger gun would be much in its favour, and it is

upon that point only that it would meet with much consideration for the purpose of this paper, as the armament is to be considered as strictly a defensive one. Two guns and mountings will be considered as 10 tons, spare gear and 200 rounds of ammunition 10 tons more, at the utmost computation. With a vessel of 4,000 tons gross tonnage this would mean an extra immersion of half an inch; double the weight here given and say it means an inch. Is it seriously worth talking about, when the vessel in question usually loads moderately heavy cargoes only, and is seldom down to her marks? Assuming, however, which is very improbable, that a vessel selected for this purpose did load quantities of dead weight, there are very few trades where the constant carriage of 20 tons would mean the loss of 50% per annum, and, in all probability, in a passenger service this would far more than recoup itself by the popularity it would ensure.

The one real difficulty which stands in the way is the one of initial cost; in other words, who is to provide the weapons? And unless the scheme finds advocates in naval officers, its chances of success are minimized. Knowing as I do that many of my friends in the Service regard it favourably, I do not look at it in by any means a hopeless manner. One thing may be regarded as certain, and that is that shipowners will never bear the initial cost, unless it be after the outbreak of war, and they discover, when it is too late, that they can do a more satisfactory trade with vessels able and willing to take care of themselves. This being so, it is almost unnecessary to go into the question of cost; but, in all probability, the entire outfit could be provided for something considerably under 2,000% per ship, and that appears to be but a small percentage upon a vessel and cargo worth, say, one-quarter of a million of money. Say that the cost of equipping fifty vessels on the long over-sea routes came to 100,000%; what is that sum to the resources of a country with such interests as ours at stake, that is supposing Government would step in and supply the requisite arms? It would be, however, but reasonable to ask, in that event, what services, if any, could be rendered by these vessels in exchange for the means of protection?

The British shipowner of to-day is a 19th century production exclusively; he can see clearly in all ways concerning shipping but this one, and that is that the defence of his property at sea is a matter which does not concern him; he pays his taxes and expects to be protected. If he would study the subject at all (of course there are exceptions), he would see the absolute necessity for his own initiative in the matter, and recognise that a trade such as ours entails certain sacrifices to retain it. We have never in modern times been put to any effort to retain it in the face of serious opposition, and he fondly hopes it is to be our heritage to all time, through some mysterious agency other than physical force. That the reign of the latter is over does not, however, appear to be at all certain, and many considerations connected with shipowning are ripening day by day, which will go far to show that our merchant service is a most important part of our national economy, and that both the questions of manning and arming are pressing their claims to be considered.

The question of manning is one which does not at present concern us here, and these last few remarks have been made in the hope that when naval officers recognise more fully the need for the co-operation of the merchant service with them, shipowners will not bring forward unnecessary and imaginary difficulties where none exist.

It will be quite fair to assume that vessels of the best class of merchant steamers are likely to prove very useful auxiliaries to the navy in the event of war, and there has been a great unanimity of opinion on this subject amongst naval officers, both in this theatre and elsewhere. One opinion will here be given as representative, that of Sir Michael Culme Seymour: he said, on the authority of Sir Geoffrey Hornby, that "the 'Oregon' could get information from anywhere," and further, that Sir Geoffrey was very strong on that point.

The argument must, I think, be on this wise: that the "Oregon" was a good useful ship, as long as she could take care of herself, by her heels or otherwise; but when another similar vessel, armed and hostile to her, appeared on the scene, her usefulness disappeared from our point of view, unless she was put in a position to say to her adversary, "Yes, you may sink me, but you will go to the bottom too;" and as our resources are immeasurably in excess of those of any other nation where ships are concerned, we could afford to play at that game until the others were tired.

The inference to be drawn from this argument is that raiders coming across an armed merchantman would not tackle her if their object were plunder only, as they could not afford to risk losing their ship; if, on the other hand, they meant destruction pure and simple, they would have to pay dearly for all they did. It is evident that the argument applies with greater force, the more powerful and less cumbrous the means of destruction become.

I leave out any question of torpedoes in connection with the destruction of merchantmen, as their cost is considerable, and, moreover, their use appears to be unnecessary, save under exceptional conditions. Dynamite or gun-cotton exploded under the bed-plate of any steamer's engines would not leave much to do in the way of very efficient destruction—the crew of the steamer at that time being, perhaps, rather busy about their boats.

In the course of the same discussion from which I have quoted the remarks of Sir Geoffrey Hornby, Lord Brassey, speaking of merchant auxiliaries, says, "There are great functions of looking out, reporting, and gathering information, for which these ships would be exceedingly well adapted," and I scarcely think sufficient importance is attached to this prospective service, or care taken to organize the vessels in such a manner that they will be available on the immediate outbreak of war.

All this is part and parcel of the one great subject. The ships are there, the men are there; they could, with no extra expense, be doing habitually, and familiarizing themselves with, the work they would have to perform in war-time; but for want of the formulation of some plan of habitual intelligence-giving, they are likely to lack much of their utility, until some time after the outbreak of war, supposing

that there are then enough of them left to do the work. On the other hand, if they were put in the position of security here advocated, and scattered here and there along the trade routes of the world, it would go far to bring raiding by makeshift vessels down to its minimum limit.

It appears to be a firmly fixed idea in naval circles now, that it will be possible, under any conditions, to maintain intact the Suez Canal route, and cable communication throughout the world. It would be presumptuous on my part to question the accuracy of this belief, but it may, perhaps, be admissible to glance at the possibility of the alternate trade route being adopted in a hurry, and to ask also how, in the event of telegraphic interruption, news is to be diffused to our many important centres of interest. And the point I wish to see made clear is, by what means, were the Canal to be blocked to-morrow, is the trade from the East to be diverted to the Cape route? Have we facilities for giving intelligence, or have we any means of coaling in Table Bay?

Personally I am of opinion that it will be found necessary to run lines between certain places secretly, and have their ends at sea in places known only to ourselves; that, however, is beyond the scope of this paper, except in that it would be done by the ordinary telegraph steamer most probably. But as apart from this, by no other means can any plan for the dissemination of news be carried out, save by the wholesale utilization of our mail steamers on some well concerted plan. It is not asserted that this is not in contemplation; but the point I desire to advocate and urge most strongly is that a system of acting in concert by mail steamers with vessels of the Royal Navy, and the habitual transference of news, should be inaugurated *now*; that the tie between the navy and the merchant service, which has grown so wonderfully of late years, should be strengthened by the adoption of an improved method of signalling and communication; and that by no other means can this be so well accomplished as by adopting the measures here advocated.

The third of the so-called arguments against the arming of mail steamers, commonly used, is the want of training, both on the part of officers and men, and their inability to handle modern weapons. I have mentioned it because I read it seriously advanced as an argument against the views here held, by one of the leading shipping papers, and the contention to my mind is by no means sound.

Rudyard Kipling has described one class of vessel in the merchant service:—

“ With her load-line over her hatch, dear lass,
And a drunken Dago crew,”

and it is scarcely necessary to remark that we are not here dealing with that type of vessel, but with mail steamers that, in point of discipline, leave little to be desired. I do not think I shall be contradicted if I assert that, once at sea, the crew of a mail steamer will do anything they are told, and that disorder is a rarity among them. I think it will be admitted that the Royal Navy has made its mark on

the merchant service, through the agency of the reserve men, and that, consequently, it is scarcely possible to discuss any such question as we are now doing of merchant shipping in war time, without some mention of this force.

In so doing I am treading on very delicate ground, but having no other resource shall, in this instance, trust in Providence.

On previous occasions I have mentioned various shipping companies by name, taking into view their special fitness for some particular work, and although that has been done, there was not then, nor is there now, any or the smallest intention of personality. A company is simply mentioned as a typical one, which would be suitable under favourable conditions for carrying out the reforms or plans here indicated.

The Peninsular and Oriental Company is probably the company that all would agree in granting precedence to in the merchant service of Great Britain, and I heard Sir T. Sutherland, the Chairman of that Company, assert last year that one-fourth of the entire number of Reserve officers sailed in those vessels. I am speaking from memory only, but am fairly certain.

One-fourth of the officers of the Reserve is a very considerable heaven even for such a service as the P. and O., and I would submit that it appears absurd to have subsidized ships officered by officers, and partially manned by men trained at the public expense, and then sent to sea in a condition so defenceless as to be liable to fall a prey to the most wretchedly armed raider having speed enough to get alongside them, or able to take them unawares, when these same men and vessels are intended to take part in the defence of our commerce after the outbreak of war.

We hear it said that we are to be prepared to make torpedo attacks, &c., on an enemy's fleet and harbours the first night after war is declared; if that is to be the sort of pace at which the warfare of the future is to begin, does it not at least seem probable that an enemy would be similarly prepared to touch us on our most vulnerable spot? That must surely be admitted, and as things at present are, we expose to the risk of capture, before they can reach port, the very vessels on which we rely to supplement our cruisers; the thing appears to me so self-evident that it is unnecessary to dwell further on it.

There are, perhaps, two points that may be alluded to here. The first is one that was mentioned to me at the Admiralty years ago when I first tried if anything could be made of the 1863 circular. It is this, that were we to arm our mail steamers, foreign nations would object, and say we were increasing our armaments; by this it would appear as if in some respects we are hampered by considerations which affect no other nation.

Take the present case of France and Germany. Does any consideration for the feelings of her neighbour prevent either of those nations from doing all in her power to devise additional means of offence or defence; or does it seem at all probable that any ~~re-~~strance on either side would receive serious attention? On the other

hand, either would contend that they were neglecting their vital interests if they omitted the smallest detail likely to benefit them in the smallest degree on the outbreak of war.

And it may be said that the habitual presence of passengers in these ships is one reason why they could not fight. Certainly no one would seek a fight with passengers to any great number on board, but most people would sooner risk the chance of a running fight and eventual escape to the certainty of a prison or an unlimited time spent at sea in a ship's boats. If war were imminent or likely, people would be chary of travelling in large numbers; only those obliged to do so would travel, and as there is no certainty that vessels will not be torpedoed indiscriminately, I fail to see that the condition of passengers could by any means be worse through being in a vessel able to some extent to protect herself. In the old French wars the presence or otherwise of passengers was never considered, save in the way of making them useful, and I suppose even now they could get some protection from gun fire below the water-line.

I do not see that damage to the upper works of a steamer by shell fire need necessarily prevent her getting to port if she could stop her pursuer by holes in his bow; at the same time I grant that a long steamer pitching in a head sea offers a mark when she lifts to a pursuing ship which, at short ranges, could not possibly escape being hit frequently.

It remains now to speak of the question of communication, or rather, the lack of efficient means of communication, should it be necessary to take steps to whip in our scattered commerce.

If the Suez Canal route is to be kept open in war time, these P. and O. steamers on their own route and doing their own work would be capable of doing enormous service. Running as they do habitually over what would necessarily be a big battlefield, it would be hard to exaggerate the importance of the work they might do, were a system of regular communication adopted at once. Almost the same importance attaches to the Cape Mail service, perhaps more so, should the Suez Canal be blocked; but it will be little use trying to arrange these matters after war is declared.

As to the system of signalling to be adopted, we appear to be as far from the solution of that matter as ever. Many have been the schemes devised, and it would appear as though elementary points were not even decided on. It is a curious thing that out of all the many and varied suggestions offered, not one can be decided upon as possessing the requisite elements, which are applicability to both day and night—simplicity and speed. Personally, I have advocated the Morse system, which, if difficult, would at least have had the merit of finality for many years to come; but the suggestion has been met with so nearly unanimous a torrent of abuse from many quarters of the merchant service, that I fear the chance of its adoption is a very remote one.

But will not the powers that be take upon themselves to decide this question, and say which principle or system is to be adopted for the signalling of the future, and let us have it at once, to do the best we

can with? Were this done, any expense incurred by fitting mail steamers, with the means of self-defence would be amply repaid by the services those vessels could render on an emergency arising, even whilst in the pursuance of their ordinary avocation.

I have in previous papers roughly sketched out what the plan of co-operation would be, and see no reason now for making any decided alteration in it.

I had intended to make some remarks respecting the Naval Reserve, and the best way to secure its greatest efficiency, but have come to the conclusion that this theatre is not a fitting place to do so. This force, however, it may be said, is capable of better work than is even now got from it, as will be seen when it is once placed on a fair and intelligible footing.

Vice-Admiral H. F. NICHOLSON, C.B.: I shall not attempt on the present occasion to do more than make what, perhaps, I may be permitted to call a running commentary on the most interesting paper that has been read to us. The subject is an all-important one. It amounts to this, the organization of our trade routes; and when we consider that along those routes, by some method or other, must pass that enormous mass of commerce, without which, as Lieutenant Crutchley justly observes, this country must become bankrupt, even if we are not starved by the non-arrival of bread stuffs to feed our population, everyone will admit this is a question which ought to receive most serious consideration. It may possibly be that this matter has been thoroughly worked out, but I think it is very important that such plans as do exist should be given to the nation at large. I admit that you cannot give them to the nation without giving them also to others who might at some time be our enemies, but I think the advantage would be very much on our side, because what we have so greatly to fear is the panic and disorganization which will seize upon the whole mercantile population on the first outbreak of war. If this were obviated, and if we had time to carry out all the arrangements made to meet the first stress, the event, probably, would not be so serious as many of us imagine. Would it not be very desirable, then, that on war breaking out, each of the commanders of our merchant steamers should know really what is the great principle which is going to be adopted to bring our commerce along the great trade routes. Are we to trust to patrols? Are we to trust to convoys? Or, are our merchant ships to be allowed to make the best use of their own powers of speed for escape? These are three questions to be considered, and there is one other which I shall propose to deal with later on. I think, as regards the first question, there can be very little doubt that any attempt to patrol these vast routes will only lead to failure. Suppose we had twice the number of fast cruisers that our enemies had—and that, I think, is taking a very extreme view—what would be the mission which these cruisers would have thrust on them? There would be the enemy's cruiser, who would lurk about at certain points of the trade route, with his engines stopped—his fires ready undoubtedly, but his engines stopped, watching for his prey, waiting for days, or even months, with but little expenditure of coal. On the other hand, what would our cruisers have to do? They would have to be racing up and down, patrolling the trade route, to find the enemy's cruiser and attack it. I believe I shall be quite within limits if I say that the consumption of coal on the ship that has to patrol would be in excess of the coal used by the other by about three to one; and as I think you will all admit that the power of the cruiser is the limit of coal endurance, we shall not have to provide twice as many ships, which I previously supposed to be a fair proportion, but we must multiply this number by three, because they will use three times as much coal. Therefore, to put us in a decent state of security, we must be prepared to put on these trade routes six times the number of cruisers possessed by the enemy. That is a very serious matter. Lieutenant Crutchley has also raised this question: Do naval

officers consider that we have sufficient ships of the "Blake" and "Blenheim" class? We have only two; that is not enough; and I should think, possibly, before any naval officer, or any expert would be satisfied that we can protect our trade routes efficiently by patrolling, he would demand that we should have about 20 "Blakes" or "Blenheims," or somewhat similar powerful cruisers. We could not possibly do it with less. That would amount to about ten millions. Then we have to maintain these vessels, and, in fact, the sums of money we should have to ask the public for would be impossible. So, I think, if we take a practical view, we must admit the impossibility of patrolling the trade routes. We might protect the ships when they come into narrow waters, but as for patrolling in the sense of a policeman patrolling his beat, the thing is absolutely impossible. I do not know whether I shall be supported in my conclusion, but it is a matter I have thought over, and that is the result I have been obliged to come to. Then we come to the next plan, and that is convoys. I think it would be wise to let it be understood by merchant vessels that on the breaking out of war they will receive telegrams at different points, informing them of the rendezvous where they might receive the protection afforded by a convoy, and if these convoys were arranged to sail at certain intervals of time they might satisfy the conditions of trade, and the conditions of providing eatables for the nation. But, undoubtedly, there is another solution of the difficulty, touched on by Lieutenant Crutchley in a very able manner, and that is the partial armament of merchant steamers. Their status would be affected by the Declaration of Paris, and I think we must be surprised when a gentleman of Lieutenant Crutchley's intelligence and industry has to tell us that he cannot understand what it means; that is to say, whether vessels are by it permitted to fire a single shot in their own defence without being condemned as pirates. It appears to me that the sooner this is settled the better, because, if the decision is in our favour, we shall be in this position, that for a very moderate amount of money we shall be able to partially arm the *élite* of our merchant vessels (dormant commissions having been previously sent to the Commanders-in-Chief on foreign stations) with a few of the most modern Q.F. guns, and then if we have made the necessary preparations beforehand we should be in a very strong position. Our merchant ships should become, when war is declared, an integral part of the country, and, in my opinion, the Government is just as much bound to protect them and mount guns on them as to erect forts along the coast of Great Britain, and more so, because the loss that will be sustained by the interruption of our traffic will be something enormous and fatal to the country. The cost of equipment for one vessel, Lieutenant Crutchley tells us, would be probably about 2,000*l.*, so that, supposing we had 200 of such equipments spread all over the world, it amounts to a mere flea-bite. When war is declared, vessels could rendezvous at certain points, the Cape, Hong Kong, &c., and ship these armaments, and then they would, in point of fact, convoy themselves, being placed in a legal position on receiving the dormant commissions already referred to. This, then, is the proposition which I think the lecturer wishes to introduce to you this afternoon; it is that merchant vessels partially armed should make a sort of joint convoys. Sea-going raiders, lying about seeking whom they may destroy, would be very chary indeed of attacking half-a-dozen merchant ships coming together if they had any suspicion that some of them had guns. I am entirely with Lieutenant Crutchley in relation to everything he said as regards the Reserve, and I am sure my brother officers most cordially appreciate the great national service which is performed now, and will in future, in all probability, be performed by the Royal Naval Reserve. They are officers and men who deserve well of their country, and they ought to be encouraged in every possible way. I do not agree with the idea that, supposing guns are supplied generally to merchant ships, the crews will not be able to work them. What we want for these modern guns is the most simple drill, and any intelligent man on the engine-room staff should be able to handle a modern gun very efficiently; there is no difficulty about it at all. We have recently introduced most excellent range-finders, that anyone can use, and with one intelligent man on board, which, surely, it would not be difficult to supply, I see no reason why every ship should not be able to work its guns satisfactorily. I feel convinced of one

thing; the foreign cruisers looking about, as they imagine, to prey on our commerce, if they every now and then found they caught a tartar, and got a shot into their bow, would become very chary what they were about. As regards signalling, it is a most extraordinary thing to me that a matter so very simple should not be arranged, and an efficient system of signalling adopted between the Royal Navy and the merchant service. Whenever I am at sea I never pass a merchant ship without signalling, and I generally get a very satisfactory answer. As regards the Suez Canal, Lieutenant Crutchley seems to think naval opinion is that it will be kept open. I have always been under the impression that in naval opinion it would be shut, and that the only route would be round the Cape. I cannot conceive that any nation would hesitate to block the Canal (and it is very possible to do so) if it suited their purpose. As regards telegraphic communication, I imagine the telegraph cables could be cut very easily.

Admiral LONG: I wish to tender my own thanks to Lieutenant Crutchley for the trouble he has taken to bring this subject before us. With regard to the Royal Naval Reserve, I think that no one can doubt its great value and importance, and I should be inclined to echo what was said by Sir Geoffrey Hornby the other day at Aldershot apropos of the Volunteers, that he felt himself as a subsidized member of society put to shame by gentlemen who came forward voluntarily to do the work. In the year 1880 a paper was read here by Sir Donald Currie on the subject of the adaptation of merchant steamers to war purposes. It excited considerable interest in my mind, and I looked the question up a good deal. It appeared that previously to 1853 there had been a clause in the Postal Contract by which merchant vessels which were subsidized to carry mails were to be armed in the event of war, but about that time some important experiments were carried out in the "Excellent" with regard to the effect of firing at iron structures, and the result of those experiments was such that it was declared that no iron ship was fit to go into action, and the clauses referred to were then expunged. That is rather a remarkable circumstance considering that now they are all steel ships, both men-of-war and merchant ships, and with respect to their unprotected parts do not differ much from the ships that were at that day rejected, except as regards subdivision. I remember one of the vessels selected by preference as being fit to be armed in those days was a wooden vessel belonging to the Cunard or West India Mail Company, the "La Plata." I quite agree that to send one ship to look after another that is roving the ocean is to send her on a very hopeless task. I do not think I need say anything about the patrolling, for what Admiral Nicholson has said I think rather knocked that on the head. Lieutenant Crutchley says that naval officers are but moderately interested in the mercantile marine. I think perhaps we should remember that the Navy is not alone kept up for the protection of the mercantile marine; it has a further and more important object in the protection of the country, and therefore, although the protection of the mercantile marine must always be a very important thing to this country, at the same time I do not think it occupies the first place. Every merchant ship is the result to a certain extent of private speculation. No doubt what the shipowner says is not that there will never be war, but that there will not be war while that ship is paying—that the ship if she lasts a certain number of years, not in any case a very long period, will pay him. That is what he looks to, and although the external trade of this country is of vital importance to the livelihood of the people in it and it is also of great value to the country—something like 90 millions per annum—I think it is not altogether a public matter, but, like the agricultural and other interests in this country, it is an interest which is to a certain extent of a private character—not entirely of public interest. Sir George Tryon in his writings on the subject has pointed out that in the event of our trade being interfered with we might reasonably dread a revolution in the country, owing to the great trouble it would bring upon the labouring classes; but we must not forget that Napoleon the First in the palm days of his power, when he had the whole of Europe at his feet, was unable to prevent trade taking the course he wished to divert it from. He was animated with great hate to this country and was desirous of crippling us on the sea, but, as is very well put by Captain Mahan, he could not do it, although he tried his utmost and had all the countries of Europe at his command, because the interests of private

individuals were so great that with bribery and corruption, and one thing and the other, what was wanted was got in. I do not think there is any power on earth that could prevent the food stuffs and raw material entering the country, although they might raise the price of it. Then we come to the "ordinary war vessel," which is supposed to have "fair moving power." I think that is a point naval officers must rather prick up their ears at, because there is no doubt that as the Navy is kept up entirely for war, the conditions under which it is to act are not familiar to us. I have been forty years in the Navy, and out of those forty years there has never been a time when the real conditions of naval war between great maritime Powers existed; therefore, there is not one of us who knows from experience what those conditions are. I have seen it actually said that a ship of war only required to go at high speeds for a short time, and on very few occasions. Of course, that is entirely false. That means in peace-time. You do not want men-of-war in peace-time; you want men-of-war to act in war-time, and the man-of-war will have to do then what the merchant ship has to do in peace. It is exceedingly important that we should in forecasting the requirements of our men-of-war as regards propulsive powers and sea-keeping qualities be guided to a great extent by the mercantile marine, what they are doing, what their ships are built for, and what they find suitable arrangements. We have seldom the means of simulating war conditions. We endeavour to simulate them as much as we can occasionally and whenever the country will afford the money to do it—about once a year for about ten days—but at other times we do not see much of what are likely to be our war requirements. I should like to say one word about the arguments that can be used against putting guns into merchant vessels—first, the question of the right to fire a shot in self-defence only. I believe there is no doubt merchant ships have a right to fire in self-defence just as much as I have to fire a shot at a fellow who comes into my house. It is not a question of right, it is a question of expediency. If you are in command of a merchant steamer with a whole lot of passengers on board, it becomes a question whether they will gain anything. In this argument it is implied that the guns which the vessel is to fire, and which I admit would be very good guns for this purpose, would obtain the superiority over the enemy, would make a hole in her bow and stop her. But we must also take the other side of the question. I have been looking at one or two of the cruisers, one being the "Piemonte," and I see she would be able to fire three or four guns ahead. Now you with your two guns firing astern would at once become a mark for three guns firing ahead, and those three guns firing ahead would be in the hands presumably of experts and gunners; therefore, the balance of chances under those circumstances would certainly appear to me to be with the man-of-war. So that although I quite think a merchant vessel armed as advocated might possibly, if she were fortunate, stop her pursuer, at the same time I think it is more a question of expediency than of right. On the second objection as to the "extra weight" I quite agree with the lecturer. On the third objection, the "want of training and ability on the part of officers and men," I quite agree with what Admiral Nicholson said. I was very glad to see a letter in yesterday's "Times" from Mr. Scrutton saying the British seamen in the mercantile marine of this country amounted to 180,000 men; that is a very good piece of news to me. I think Lieutenant Crutchley makes a decided point about the merchant ship having arms on board. It is news to me that they do not carry arms. I certainly thought they did carry a certain amount of arms, but I think it is a matter of great importance that any British merchant vessel going to distant parts of the world, especially to the Chinese coast and places like that, should carry arms. Not very long ago a British merchant vessel was seized by her own Chinese crew through the intervention of pirates, and it does seem to me that Lieutenant Crutchley has put forward a very important point when he says that vessels ought to carry arms on board, and it might be a matter to consider whether these vessels, whose armament is in store, might not as well carry it on board; I think it would probably be better. With regard to torpedoes I rather think I put the question myself about that, but, of course, for a torpedo to be fired at a merchant ship the vessel firing must be very close. She should not be more than 800 yards distant, and presumably long before she got to that distance she would have done the business with her guns, unless firing at night.

The question I put was really with a view to vessels passing up the British Channel at night. Take the case of a torpedo boat lying out in the Channel. A large vessel comes past. She does not know what she is: is she to fire at her or not? If she sings out the ship will fire at her. That is the idea I had in my mind. With regard to the Suez Canal, I presume this really is a matter that would have to be decided by actual fighting, but, whatever view may be taken, no one can doubt that Lieutenant Crutchley is wise in saying the alternative route should be fully considered. I have no doubt it is fully considered in these days when we have a Naval Intelligence Department. I should like cordially to endorse what Lieutenant Crutchley has said about the discipline of the merchant service. I had the good fortune to go across the Atlantic in the "Majestic" the other day, and to come back in one of the Allan steamers. I was exceedingly pleased to see the way in which everything was done, and the discipline of the crew. It appeared to me everything was done very much in the same way as it would be in a man-of-war. I have no doubt that is the case in all our great mail steamers. As to the expediency or otherwise of a mail steamer with a number of passengers on board beginning to open fire on an enemy, of course there are a great variety of cruisers, and, no doubt, if it was only a third-class cruiser she might get away, but it would be a serious matter to put it in the power of the captain of a mail steamer to subject his passengers to an enemy's fire by which they might suffer very much, and possibly no good might come of it. I think we really must rely on our Navy for the protection of commerce, to which mercantile auxiliaries armed and commissioned as such will be most valuable. I do not feel convinced that it would be desirable that a mail steamer with her passengers on board should attempt to fight an enemy.¹

Captain W. F. S. MANN, R.N.: The points on which I intended making a few remarks have been so fully dealt with by the two previous speakers, that I will only enforce what has been said about the utilizing of British merchant seamen in the working of guns if mounted in their own vessels. I have had the advantage of seeing a good deal of these men lately, for during the time I commanded the Victorian Naval Forces we recruited from British merchant vessels sailing to those waters, and at first I was surprised to find how soon they settled down to man-of-war ways. But the difficulty we found was in making good Nos. 1, or captains of guns, and I think that would be the trouble in the mercantile marine. Any man with common sense can soon learn to "work" a gun, but aptitude and sound training are necessary for accurate laying and firing. Admiral Long seems to think that Lieutenant Crutchley intends armed merchant vessels to resist men-of-war. I understood him to mean such armaments were only for defence against attack by vessels of their own class—that they would never offer resistance against a properly built man-of-war. Their heels would be their only defence in that case. Is that so?

Lieutenant CRUTCHLEY: Certainly.

Admiral LONG: I did not understand that.

H.S.H. Captain Prince LOUIS OF BATTENBERG: Practically, I take it, the lecture may be summed up as a plea for the armament of merchant ships in time of war. This is not a new idea. I think it has been discussed here before, and I daresay most of us present have thought about it a good deal. The lecturer has given us three reasons why merchant ships should not be armed. I confess I have never got beyond the first one, which he states to be "the questionable right to fire a shot in self-defence only, or to be in possession of arms." Before going into that I cannot help saying how struck I am with the statement that ships after the Declaration of Paris were supplied with guns and ammunition by the Admiralty on complying with certain requirements. I may be especially ignorant, but I never heard of it before; and if the lecturer can spare me a few words in reply it would

¹ Lieutenant Crutchley having pointed out that he only contemplated defending merchant steamers against mercantile auxiliary cruisers in war, my argument, though weaker, appears to me still of sufficient weight to influence the decision.—S. L.

be most interesting to hear something about it, because it appears to me as being the most important statement that this paper contains. Virtually if it was admitted, as he says, that settles it. It is all the more remarkable as coming so soon after the Declaration of Paris was signed; but, leaving out the question of right for the moment, it may be well, perhaps, to consider how the possible enemy would treat a merchant ship armed. I believe it is one of the recognised axioms of war that the active operations of war should be carried out by the armed forces of the country only. For one thing it is, no doubt, the quickest and most humane way of carrying on war, and a departure from it has always been treated up till now very rigidly indeed. In the Franco-German War there were repeated instances of unfortunate Frenchmen, peaceful citizens, who found their homes and hearths invaded and took up arms against the invader, and, according to the rules, so to speak, they were strung up when they were caught. I do not for one moment pretend that the crew of an armed merchant ship captured would be treated like that, but the possibility ought to be kept in view. And if we do not go to these extremes, the moment a merchant ship begins to fight, the commander of the enemy's ship (man-of-war, or whatever she may be) is perfectly right to treat her as one of the fighting units of the country against which his country is at war; that is to say, that instead of trying to make a capture, to compel her to surrender, bringing the ship into port and making a prize of her, he would attempt to sink her like you would sink a man-of-war. Therefore, apart from the danger of being killed and wounded by gun fire during action, she becomes a legitimate target for a Whitehead torpedo, which is a tolerably appalling thing to contemplate in the case of a merchant ship. In case of capture all on board would be taken off and treated as prisoners of war—unless, indeed, they were dealt with summarily. I do not see how you can possibly get over this point. But then, as Admiral Long has pointed out, there is also the question of expediency. Now as to the question of torpedoing merchant ships; the more I think of it the more difficulty I have in believing that any civilized Power in the nineteenth century would deliberately sanction its armed force committing wholesale murder on the high seas, because that is what it comes to, and nothing short of that. Coal would probably be contraband of war—I have not much doubt about that in my own mind—only coal will be so much more precious to our enemies than it is to us, as we have always got it and they have not, that they will do everything in their power to capture a collier intact; but still if every means of capture failed, no doubt a collier would be liable to be sunk by a torpedo, and justifiably so. Of course there is another side to it which appears very heartless and very monstrous, and I would rather not give utterance to it in this theatre. With regard to the Suez Canal the two distinguished Admirals who have preceded me have already controverted the lecturer's impression, that naval opinion was in favour of keeping the Suez Canal open. To my mind it seems absolutely impossible. When I was senior officer at Port Said a year or two ago a P. and O. steamer ran ashore, and although the Canal was only blocked for about something less than 24 hours, it gave one an idea of what would happen in war-time, for by next morning there had arisen in the harbour at Port Said a perfect forest of funnels; there was hardly standing room, so to speak, inside. What would happen in the case of war? I take it the Canal would be sure to be effectually blocked at the outset, probably before war was actually declared.¹ I maintain, therefore, it would be nothing short of criminal to allow a single British merchant ship to pass Gibraltar or Aden, if war were imminent. The result would be the piling-up of this continuous stream at the bottom of a *cul de sac* 2,000 miles long, which would be appalling to contemplate. I am most entirely in accord with the lecturer on the point of signalling. I, for one, have always thought that on the whole the Morse system is the best. One objection which it appears to me could be raised from the point of view of the merchant steamer is that although the Morse system is no doubt easy to learn if you make up your mind to do it (all our signalmen in the Service know it well, and they continually

¹ I purposely abstained from stating precisely how this could and would be done.—J. B.

use it), yet you must keep it up by constant practice, otherwise you lose it; the lecturer can tell you better than I can how far it would be possible in his Service to keep men really efficient to practise signalling. I would rather not touch upon the other objections raised to carrying guns because of extra weight and want of training on the part of the men, though I must confess I have very considerable doubt as to the practice which would be made by the crew of a merchant ship. The lecturer says that the shipowner declares that he pays his taxes, and, therefore, ought to be protected, and a distinguished Admiral endorsed this very cordially. It may be presumptuous on my part to differ from him, but I confess I should say exactly the same thing. The shipowner is quite right; he pays his taxes, and he ought to be protected. He can be protected, and in my view the only efficient protection of the merchant service is by the Government and by its proper armed forces. That we are short of cruisers is an undoubted and lamentable fact, only I do not see that you want a "Blenheim" or a "Blake" for the purpose; you can get something much lighter, but she must be faster. The real safety for merchant shipping generally appears to me to lie in their speed; at any rate, as regards our larger ocean-going steamers, it is an indisputable fact that there is no cruiser afloat, British or foreign, which can even keep up with them, much less hope to overtake them. As to patrolling trade routes in the way Admiral Nicholson has sketched it out, I confess the idea is new to me that it should be done in that way. It is evident that it would be perfectly useless, and for this reason, I presume, it is proposed that the auxiliary steamers on the Admiralty list are to be armed on the spot, that is, at the foreign stations. In that case, however, the time lost would be something serious. Our distinguished Chairman has had personal experience of this, and, therefore, we shall probably have some interesting remarks on the subject much better worth listening to than anything I can say, but it is difficult to understand how the thing will work.

Captain KING HALL: I feel rather diffident in rising to make a few remarks. I am afraid I entirely disagree with the last three speakers as to closing the Suez Canal in time of war, and I agree with Lieutenant Crutchley that the Suez Canal route will have to be kept open. First of all, people talk about blocking the Canal. If the Canal is to be blocked, you will incur the enmity of all neutral nations, and in order to keep the Canal blocked you must maintain a force on the spot, and if you keep a force there to keep it blocked, you might as well keep a force to keep it open. The trade will have to go through the Suez Canal: I am quite convinced upon that point, and I have thought over it many times when stationed at Suez. No doubt the risks are great in our trade going through the Mediterranean, but there is only one way out of it, and that is to keep the Mediterranean clear of the enemy. If war were to break out with any maritime nation, an event, unfortunately, not improbable, the result would be that all our sailing fleet would be laid up, and also a large number of our slow steamers, and the food of this country, and the raw material, would have to be brought in fast steamers—those steamers which a great many naval men are looking to for help in the duty of patrolling the seas. I believe that for the protection of our commerce we should have to rely upon our Navy principally, and, in fact, almost alone. The Navy must be strengthened. I do not believe in arming merchant ships to protect themselves: I do not think they can do it. There are many objections to such a plan, which have been ably stated by Prince Louis, by Admiral Nicholson, and others, and I should not have risen to say anything at all, had I not felt very strongly on the question of the Suez Canal route. I believe in time of war we shall have to keep it open at any cost. It is not likely that the Americans, Germans, and other neutrals, when they see a chance of taking our trade, will allow us or our enemy to stop the Suez Canal; and I am quite sure it will have to be kept open. If a steamer sinks in the Canal it is very easy to dredge round it, and there is no difficulty in clearing a passage, even without raising the steamer (which would only sink a couple of feet) in the course of a few days. I quite agree with Lieutenant Crutchley that it is highly desirable that the means of signalling should be improved between the two Services; at present, I think it is in a very unsatisfactory state.

Prince Louis of Battenberg: I think Captain King Hall has misunderstood

me. I did not mean that we should stop the Suez Canal. I meant that the enemy would do it, and that we could not prevent it; not all the King's horses and all the King's men—nor all the King's ships—could prevent it: I am quite sure of that.

Captain KING HALL: We shall have to keep it open.

Prince LOUIS OF BATTENBERG: We cannot do it.

Admiral NICHOLSON: With regard to keeping the Canal open, Captain King Hall seems to think it is possible for us to do it, but I imagine it is quite impossible. Any nation could block the Canal without trouble. Captain King Hall talks lightly about its being cleared with a small dredger in, perhaps, ten days, but Prince Louis of Battenberg has explained what happens even after 24 hours detention. When you consider the advantage that would accrue to the enemy by blocking up our passage to the East, you may be quite sure that some plan for blocking would be carried out. If it were a question, for instance, of two armies racing for India, one going overland and the other wishing to go by sea, I imagine that there would be neither any difficulty nor any hesitation as to blocking the Canal.

Lieut.-Colonel G. T. CARRÉ: I would, sir, with your permission, ask Lieutenant Crutchley if he has taken into consideration the likelihood of a convoy of, say, six armed trading steamers of the P. and O. or Orient class coming into contact with an enemy's cruiser? Would they, in his opinion, give way, or attempt to drive the cruiser from their course?

Admiral LONG: I might mention one fact illustrating the advantage of signalling in the event of war. It occurred in 1870, when Admiral Hornby was ordered home from the Pacific out of the ordinary routine. When we got on the Line he spread out the squadron of six ships to intercept the mail steamer to Rio. They did intercept it, and brought us the two most extraordinary pieces of news I ever heard; one was the loss of the "Captain," and the other was the battle of Sedan.

Lieutenant CRUTCHLEY: There are very few points that it is necessary for me to deal with in reply. I should wish to say that this is no question whatever of a merchant vessel contending with a man-of-war. In the first place, you would trust to your heels, and if you did not trust to your heels your common intelligence would tell you it was no use fighting a ship built for fighting if she had the heels to come to the side of you. The argument in favour of arming merchant vessels is solely to protect them against vessels of their own class, because it is always assumed we have men-of-war enough of our own to look after the enemy's men-of-war. It is the armed merchant vessels that would be sent out by them that would do the mischief. Prince Louis of Battenberg wishes to know if I can give an instance of a vessel armed by the Government since 1863. I think there is a friend of mine present (Captain Ladds, Elder Brother, Trinity House) who will bear me out in saying that about the year 1863 the "Golden Fleecce" of the General Screw Company, trading to Calcutta, was supplied with guns and entirely armed by the Government.

Prince LOUIS OF BATTENBERG: Was she intended to fight then and there, or was she armed with a view of receiving a commission subsequently?

Lieutenant CRUTCHLEY: She carried the guns habitually to use if attacked whilst engaged in her ordinary occupation. How could it possibly be contended that a vessel resisting capture (as has been done scores and hundreds of times in the past) is a privateer? Merchant vessels have fought in the wars toward the close of the last century, and did good work too, and if Naval Reserve uniform will not protect its wearers from hanging, the sooner it is so understood the better. It might also be asked whether Volunteer uniform will protect its wearers from the fate of the "franco-tireurs."

Prince LOUIS OF BATTENBERG: Was she entitled to fight at once, or was she to wait? Did she have a letter of marque in case of war?

Lieutenant CRUTCHLEY: Can Captain Ladds give me any information?

Captain LADDS: I am afraid I cannot. I think the guns were only put on board the ship as a precautionary measure, as they would be on any other ships.

Lieutenant CRUTCHLEY: Admiral Long said doubtless there were schemes in existence for the organization of these merchant vessels in the event of war

breaking out. I did not doubt it, but it was not my contention that the Suez Canal would be kept open in war-time, because my own opinion points entirely to the contrary; but I think if you take the sense of all the discussions that have gone on on naval tactics in this theatre you will find the majority of naval officers assume that the Canal will be kept open in war-time. It is for that reason I have assumed that the naval opinion is that the Canal will be kept open. Personally, I think the Cape route will have to be adopted. And although there may be plans in existence for the safeguarding of merchant vessels on the outbreak of war, if none of us know anything about it there will be such confusion that any scheme will be almost unworkable for the first months of naval warfare. I think, without divulging the scheme, some details of it should be entrusted to certain vessels, say mail steamers, telling them that they would have certain duties to perform on the outbreak of war, so that we should not be altogether in the dark. With regard to the question Colonel Carré asked about the six merchant ships and one man-of-war, I should say if the six merchant ships had the heels to run they most piously would.

The CHAIRMAN: I think it only remains for me now to make a few remarks upon what has struck me in the course of this debate, and also before I came here. The question of protected routes and convoys has been already a good deal discussed. The convoys, I look upon it, will be an absolute necessity after war has broken out; the protected route I look upon equally as a necessity when war first breaks out. Allow me to give you a little experience of my own, showing the views I held at the time, and which I still hold; it will explain what I mean. I do not mean vessels rushing up and down at the rate of 300 miles a day, as Lieutenant Crutchley proposes; I mean vessels husbanding their coal resources as well as the enemy does. I happened to be in command at the Cape during the Russian war scare of 1885, and my telegraphic communications were interrupted by accident. I sent all my ships to certain stations, such ships as I had, and I wrote to the Admiralty to state what I had done, and request them to inform shipowners in order that their ships might follow the route from one protected point to another. I believe that is a system that will be necessary on future occasions to be undertaken by all Commanders-in-Chief. In the first place, at any rate, a merchant ship that is chased will know not only where to run to the nearest English cruiser for protection and assistance, but try and lead the enemy's cruiser into the hands of his own cruiser. The great risk to our commerce will be on the first outbreak of war, when, as Lieutenant Crutchley says, the commerce will be scattered about over all routes at once without any knowledge of what is going on, because ships now run long distances without touching anywhere. I think the Orient line go out to Australia without touching at the Cape. (Here Lieutenant Crutchley remarked that the Orient ships now go through the Canal.) In my time they went round the Cape, sometimes they touched and sometimes they did not. The transfer of the carrying trade is of course a thing we have to look upon as possible if we are not prepared to protect our trade. It can only be protected by very careful organization, and also by adding to our cruisers a number of auxiliary cruisers in the shape of armed merchant vessels. But I do not mean by those armed merchant vessels the armed merchant vessels Lieutenant Crutchley is speaking of; I mean the regularly commissioned ship, armed, officered, and acting in concert and under the orders of the Admiralty. In the case of arming other merchant ships I would like to know where Lieutenant Crutchley wants to stop. Does he propose to use his weapons without any commission to do so? If so, when he is caught he is a pirate, and hung as such. It is, no doubt, laid down absolutely in all our authorities on international law, that any ship has a right to defend itself, only you must take into consideration that if you do so it is at your own risk, and that any ship offering what may be called a useless resistance deserves to suffer for it. It probably causes loss of life to the enemy and the enemy would very naturally be irate and would sink you for your pains and not pick any of you up. It used to be said, and I suppose the same law would hold good between men-of-war of the present day, that if a small man-of-war fired into a big one, the big man-of-war would simply sink her and not try to pick anybody up, and it would serve them right. I think that was generally so. I quite agree

with those speakers who look upon it as absolute certainty that the Suez Canal will be blocked in the case of our going to war with any maritime nation, or combination of nations, that can contest with us the superiority at sea. In the case of war with France, for example, the Suez Canal will begin at Gibraltar and end at Aden, and between these two points there will be no mercantile traffic till we have succeeded in establishing our superiority, and then we can go where we like and do what we please, and nobody can bother us in any way whatever. There are one or two points also in connection with the armed merchant steamer. Lieutenant Crutchley depends upon the discipline, but he says nothing about the inducements for the crews of the merchant steamers to fight. I do not think that the crews of merchant steamers will undertake to fight unless it is made worth their while. It must be made worth their while either by very much increased pay, or by hopes of prize money, and if you are to employ the armed merchant vessel with a view of making prize money you turn her into a privateer. I know there are many people who consider the Declaration of Paris very detrimental to this country, but there was also a very prevailing opinion in the last long war, including that of Lord Nelson himself, that "privateers were little better than pirates," and that "he wished there were no such vessels allowed." As for the co-operation of naval officers with the merchant service, I quite agree with Lieutenant Crutchley; but I think I may put it the other way—we look to them for co-operation with us, and we feel certain we shall get it. We can all remember the occasion of the "Trent," when the merchant seamen came forward so splendidly, all eager to share with the Navy the risks and dangers of war and take their part in it, and I am quite sure from my own experience that they will come forward willingly enough now. It so happened that while I was in command at the Cape I was ordered to call out the Royal Naval Reserve—the only time it has been called out—on a certain day, if I got no orders to the contrary. The telegraphic communication was interrupted and I called it out. The men came down from Kimberley and all parts of the Cape with flags flying and cheering; they were all eager for a row. I think it is no use for Lieutenant Crutchley to try to lead us to believe that any independent fighting on the part of a merchant ship is possible or desirable. That we shall require the best of his merchant ships and himself and the best of his men to assist us in case of war there cannot be a doubt, but beyond that, I think he must not expect we shall go.

Lieutenant CRUTCHLEY: If you will permit me to interrupt you for one moment, sir, it occurs to me that the argument is extremely one-sided; these people undoubtedly will be attacking us with the very means which you say we are not to use in self-defence.

The CHAIRMAN: Most other nations, as well as ourselves, are bound by the Declaration of Paris in the matter of privateers, that is, Russia, Prussia, France; I think all European nations but Spain have bound themselves not to employ privateers, but they have not bound themselves over not to arm merchant vessels as we have done. The Prussians during the war with France started what they called a "Volunteer Navy," by way of evading the Declaration of Paris. Russia followed suit and has now a Volunteer Navy composed of merchant ships that are said to carry their guns in their holds, and do partly Government work and partly cargo carrying. They are always working backwards and forwards between the Black Sea and Vladivostock. They have at any rate these ships to lay their hands upon when they want them, and we have also, and have a very much larger pick. I admit that they will employ the same means as we shall employ, but I do not admit that they are at all likely to do it better than we do. If there is a chance of that it is merely a question of organization, and I hope our organization will be found sufficient when the time comes. It only remains for me now to call upon you to give a vote of thanks to Lieutenant Crutchley for his interesting lecture which has evoked a discussion which cannot but be useful.