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BLOCKADE IN RELATION TO NAVAL STRATEGY.

By Captain MAHAN, U.S.N.

THE Council of the Royal United Service Institution have done me the honour to ask a paper upon the following thesis:—

“THE NAVAL STRATEGY OF THE PAST HAS BEEN DEPENDENT
UPON POWER TO MAINTAIN CLOSE BLOCKADE OF HOSTILE
PORTS. CAN SUCH BLOCKADE BE MAINTAINED UNDER PRESENT
CONDITIONS OF STEAM, STEEL, AND TORPEDO-BOATS?”

“IF NOT, WHAT MODIFICATIONS ARE DEMANDED BY THE CIR-
CUMSTANCES, LARGELY VARIED, FROM PAST WARS?”

That this is a question involved in great difficulty, if not obscurity, will be readily admitted by all who have given thought to the conditions, or have had experience of them. No reply can be more than tentative until we have the experience of actual war, or until there is made a more exhaustive attempt, than I think has yet been done, to reproduce all the difficulties—not on one side only, but on both—as well as *all* the careful measures to insure success that would be taken by a man under the actual weight of responsibility. Experiments upon war, in time of peace, have little advantage over a game, unless the effects of danger and of doubt, in inducing caution and precaution, can be represented to an extent that they now rarely are.

Under these circumstances my reply must reduce itself largely to an attempt to compare the conditions of the past with those of the present, in order, not so much to decide myself, as to facilitate a conclusion, whether the change, superficially so great, is really one of kind, or of degree only.

It is allowed on all hands, as an historical fact, that such blockades were instituted and maintained with great rigour and efficacy, though always subject to the chance of successful evasions, during long periods of the French Revolutionary Wars. Under former conditions, often both severe and complicated, the thing was done. The question now proposed is: “Can the same, or an equivalent, system be maintained, under the changed conditions of the present day?”

The fact that the question raised depends upon conditions essentially transient in character—conditions which are of the present, not of the past, nor at all certainly of the future; conditions characteristic of the vessels and of the weapons, with which the strife is to be fought, rather than of the unknown regions which may be the theatre of war—constitutes a fair presumption that the problem itself is in its nature more tactical than strategic—in the strict sense of the latter word.

It is evident, also, that we must not too lightly assume the methods of former days, however admirably they may have been adapted to the ends then in view, as mere precedents, to be followed unquestioningly in our modern practice. We can only safely reason upon the experiences of the past when we have penetrated to, and laid firm hold upon, the principle, or principles, which received recognition and interpretation in our predecessors' methods. When the latter have stood the searching criticism of experience and analysis, we can confidently assert that they were a valid application, under the conditions of one age, of principles that are probably true at all times, and which we may hope to detect by patient study. But when we have correctly stated the principles, it by no means necessarily follows that the application of them will be the same, or superficially even much like those of previous generations.

There is another caution which I think may wisely be observed, namely, not to assume too easily that our forefathers hit upon methods absolutely certain of success in practice—not liable at times to failure. There are few, if any, characteristics of the utterances which I from time to time hear, or read, on the subject of actual warfare, which impress me more strongly than the constantly recurring tendency to reject any solution of a problem which does not wholly eliminate the element of doubt, of uncertainty, or risk. Instead of frankly recognising that almost all war-like undertakings present at best but a choice of difficulties—that absolute certainty is unattainable—that the "art" consists not in stocking the cards, but, as Napoleon phrased it, in getting the most of the chances on your side—that some risk, not merely of death but of failure, must be undergone—instead of this, people wish so to arrange their programme as to have a perfectly sure thing of it; and when some critic points out, as can so easily be done, that this may happen, or that may happen, and it is seen undeniably that it may, then the plan stands condemned. "War," said Napoleon again, "cannot be made without running risks, and it is because my admirals have found out that it can, everything attempted by them has failed." Even had we not that high authority, the experience of the blockade system of the past, which forms the basis of the question proposed for treatment, would show that, however sound in principle was the practice of those days, it was by no means infallible; that it ran great risk of failure from circumstances, sometimes anticipated, sometimes unforeseen; and that such risks, constantly incurred, and indeed inseparable from the conditions, did from time to time cause failure and partial disaster. Most of us will recall Nelson's exaggerated expression, "Nothing ever kept the French fleet in Toulon or Brest when they had a

mind to come out"; but this exercised no deterrent effect upon his resolve "never to lose sight of the Toulon fleet." He and the men of those days, whether they analysed their convictions or not, were of a temper which did not yield under partial defeat. They stuck to a plan which in its accuracy seems almost intuitive, so wanting is it of technical expression, or reasoned statement, in their writings; and, as the principle on which it rested was perfectly sound, and the practice based upon the principle substantially the best available to them, they realised the success which in the great majority of cases will reward a right line of action, consistently followed through the ups and downs of good and evil fortune. As the Scriptures have it, "He that endureth to the end shall be saved."

It behoves us, therefore, to consider, first, what was the principle which found expression in the close blockades of the last century and early years of the present; and here I may remark, in passing, that the very word "close" to a certain extent begs the question, and assumes a power which did not actually always exist for the blockading fleet. Nelson's statement, above quoted, by no means stands alone. "Here we are," wrote Collingwood (I quote from memory), when in charge of the Rochefort blockade, "lying to in a heavy gale, ninety miles off shore. I cannot with certainty prevent the enemy slipping out before I return, yet I should be intensely mortified if he succeeded. *The only thing to deter him is the fear that he may fall into our midst.*" These last words are worth remembering, as indicating the doubt that the enemy too must have—that he, too, must run risks—and that, if the fear here suggested were realised, disaster would fall upon his schemes. Many a happy chance has slipped through the fingers of this or that warrior, because he did not know the hazards to which his opponent was willingly, or necessarily, exposing himself; and excessive pre-occupation of the mind with one's own risks or difficulties is often the cause that blinds men to such chances. I believe that failure to achieve great results is more often due to anxiety about one's own dangers than to over-confidence and rashness. There is a time for prudence, but there is also a time for daring. "It is better to be alarmed now, as I am," wrote Torrington, "than next summer when the enemy is out." Over-caution in campaign may possibly prevent immediate disaster; but it is equally apt to cause ultimate ruin by failure to utilise opportunity. Nelson's biting comment reaches many more men than the admiral at whom it was first launched: "He is perfectly satisfied that each month passes without any losses on our side."

The two great historical instances of blockades, so called, upon a really extensive scale, and sustained with steady resolve through considerable periods of time, are the blockades of the French military ports by British fleets, during the Seven Years' War and the Napoleonic era, and the blockade of the coast of the Southern Confederacy by the United States Navy, during the Civil War, 1861-65. The latter, however, was a purely strategic operation, which may be accurately described as a steady and strangling pressure upon the enemy's lines of communication, with the result of producing exhaustion through the failure of necessary

resources. It resembled, even in method, the continental blockades of Napoleon's decrees and of the British Orders in Council; and of their spirit, except that they disregarded existing international law, it was a precise reproduction, in the suppression of trade through an extensive coast line. Owing, however, to the fact that there was practically no hostile navy to be dreaded, no tactical precautions had to be observed by the blockading forces. These were, in consequence, loosely distributed over an immense line, without any thought of mutual support, or of danger from an enemy. Never did the cordon system, so sweepingly, yet justly, condemned by sound military writers, when adopted as a defensive plan against a valid enemy, receive a more complete illustration; yet, under the conditions of the time, it was admirably calculated for the particular emergency. The United States vessels had not to think of possible injury to their own coast, or to their distant interests, by the escape of the enemy's ships, except in the depredation upon sea-borne commerce by scattered cruisers. The escape of the latter, in isolated cases, through the blockading line could not be prevented; while to protect the trade threatened by their evasion would have required the detachment of so many vessels as to impair seriously the attainment of the far more important military object of the blockade—a fact worthy of most serious consideration in connection with the present subject; for it justifies the remark, parenthetically, that the vast increase of force necessary to repress damage by vessels that have escaped, over that required to prevent their escape in numbers sufficient to constitute a serious danger, emphasises forcibly the imperative need of intercepting such escape, if it can be done. It will probably, therefore, be admitted by all, that the blockade of the Southern coast was a purely strategic operation, involving little or no practical difficulty regarding the manner of distributing the several detachments upon their respective, and often petty, scenes of operations.

The case was radically different with the British Navy in the periods 1756-1763 and 1793-1814. Whatever the strategic plan, the consideration of which we will for the moment postpone, the problem which its adoption presented to the British admirals was one essentially tactical, viz., how to dispose their ships before the hostile ports, and how to maintain them there, in such wise as to prevent the unmolested escape of one or more divisions of vessels, which, if once away, might do incalculable harm before traced to the unknown goal for which they were destined. That the usual tactical aim of the French was the exact converse of this is, I believe, generally recognised. Their object was to evade the force stationed before the port, to shun battle, in order to effect a certain injury to the enemy's possessions; or, in rarer cases, to support large combined movements of the land and sea forces in regions more or less remote. Under such conditions, the duty of the watching fleet, as long as it lasted, was excessively onerous. Not only did it entail a state of uncertainty and prolonged anxiety, indecisive of tangible results, but by far the greater strain fell upon the outside fleet, which was in the position of the defendant and underwent most arduous exposure. For all these reasons,

but particularly because it was necessary to end suspense and to bring matters to an issue, the primary hope of the British admirals was not to shut the enemy up in his ports, but to compel him to battle when he came out, or as soon thereafter as practicable. The blockade therefore was to be "close," so far as that word was at all applicable, for this purpose only. It is well known that Nelson, with his clear perception of facts in their mutual relations, emphatically rejected the term "blockade" as applicable to his own operations before Toulon. "On the contrary," said he, "every opportunity has been offered them to put to sea, for it is there we hope to realise the hopes and expectations of our country"; but at the same time he, with equal emphasis, and free use of superlatives, charges his frigate captains, "It is of the utmost importance that the enemy's squadron in Toulon should be most strictly watched, and that I should be made acquainted with their sailing and route with all dispatch."

Accepting this as the real expression of the British aim, which upon the great authority of Nelson we well may, let us now try to weigh the advantages and disadvantages, as compared with the conditions of to-day, under which the British admirals then worked in conducting a plan, the success of which I presume is now generally accepted. For of one thing I think we may be reasonably certain, that the strategic danger, and the strategic aim, of a navy which seeks to close-watch hostile ports, are the same to-day as formerly. Whatever the number of ships needed to watch those in an enemy's port, they are fewer by far than those that will be required to protect the scattered interests imperilled by an enemy's escape. Whatever the difficulty of compelling the enemy to fight near the port, it is less than that of finding him and bringing him to action when he has got far away. Whatever the force within, it is less than it will be when joined to that which may, at or near the same time, escape from another port. Whatever the tactical difficulties involved, the strategic necessities compel a diligent study of how to meet them.

The greatest change in the conditions, I apprehend, is the facility now enjoyed by the inside belligerent of moving at any time, and in any direction; to which, and incident thereto, is to be added the fact that the indications of an intention to move are less open to observation than formerly. Then, with the wind in certain directions, the outside ships could feel perfectly sure that the opponent could not come out; and when a successful sortie had been made, but the escaping division been seen by a look-out frigate, the course steered with reference to the wind prevailing might (or might not) give some clue to the destination. It would be pedantry to cite from the numerous proofs of these statements in the correspondence of the day. The same is not the case now—certainly not in any degree comparable to what then obtained. Unless I mistake, the general opinion of those who have had experience is, that it is impossible to prevent the escape of the inside ships. Not having the experience, I feel very great diffidence in expressing even a partial dissent; but when I observe that the conviction of the difficulty of detecting an escaping enemy does not seem to qualify perceptibly the

assurance that the low-lying torpedo-boat will easily find its prey under similar circumstances, it appears to me possible that we have here again an instance of the tendency to see all the difficulties on our own side and the advantages on the other. Still, it does remain true that, unless you can compel the enemy to come out at once, or at least very soon, the choice of time and conditions remain with him. All that can in compensation be said is, that the outside party has the same facilities for judging what is practicable at any moment, as the inside; and that the dispositions of each day and night must be made to correspond to the conditions of weather and other circumstances. A night favourable to the operations of the torpedo-boat will not justify the same arrangements as one where it can with difficulty discover its object, or fire with precision.

The question, therefore, presents various phases, but is it not after all essentially one of look-out? of watching a line more or less long, which the enemy may break through at any point, or at least at several points? Whatever the length of the line, the situation in so far reproduces the essential characteristics of one very familiar in warfare, when one party stands on guard over a long line. This has in the past been variously met. The cordon system, so well known from the liberality with which it has for some generations been condemned, sprang with all its faults directly from the necessity of guarding in some way a long line. It is true, however, and will no doubt be urged in reply, that there is a most important difference in the fact that, the line being once broken through, the great mobility of a naval force enables it to be off and away for its destination, and possibly to disappear from sight and knowledge, without permitting that gathering of the defendant's masses which may be necessary, before pursuit can be adventured. Here, however, very much will depend upon the length of the line through which evasion may be attempted. In a port with but one entrance this may be greatly contracted, according to the dependence the outside party feels in his own protective measures against surprise, and especially against torpedoes. Such a port would resemble a river, or a mountain chain, with but one practicable passage. In a port with two or more practicable exits the difficulty is increased in proportion to the distance of these apart, and the other hydrographic conditions. Two entrances may do no more than dictate a central position for the outsider's force, or it may compel him to double it. The weather, again, will modify the length of the outside blockading line—the area, that is, of the circle, upon whose circumference the battle-ships will lie or move. The inner line, the sentries, must always be close in.

It is unnecessary to insist that the belligerent who proposes to take position off the enemy's ports must possess decisive superiority. This is universally admitted. The outsider has the more difficult task; he is on the defensive; he undergoes more wear and tear. He also, as has been intimated, ought to incur as little delay as possible in concentrating a pursuing body, at the least equal to the party escaping. The

only adequate provision for these conditions is greater material force. Moreover, the ships with clean bottoms should always be as numerous—at the very least—as the enemy's ships of the same class within. If track of an evading division is not lost, a very consequential factor in pursuit is likely to be the ship first to give out or to slow down. This is a contingency that cannot be dismissed as improbable. It is just such chances as are continually happening—*l'imprévu qui arrive*. Who, with the experience of summer manœuvres, will say that in a division of six battle-ships and attendant cruisers, pressed at high-speed to shake off pursuit and proceed on a mission—or, on the other hand, to pursue such a force—the risk of a hot journal or some breakdown in machinery need not be taken seriously into account?

Let us, as an example, assume such a division to have run out, and that by clever stratagem or otherwise it has got twenty miles' start—a long start in a stern chase—before the outsiders get on the track. Two of the heavy (or fast) cruisers—look-outs—that should ply in couples between the sentries and the main body, have not lost their touch and are following. It is impossible they should be attacked, for their main body is following; therefore they cannot be shaken off. Assuming equality of speed and luck—and equality at the start must be assumed, unless we are to have problems too hopelessly complicated for discussion—the chance is equal in which squadron a laggard will turn up; but, if the chance happen to the pursued, it is much more serious than it would be to the pursuer, for he must abandon the ship or fight—which, again, means abandon his mission. The pursuer, on the other hand, simply leaves his ship behind and continues pursuit. He certainly would not abandon it, for what has happened to him may next happen to the enemy. Even if it be a battle-ship he has lost, and he therefore is by one inferior, he would not be justified in letting go his grip, and with it the chances which the chapter of accidents may next offer.

It may, however, be urged that this escaping by a whole division is not what will be attempted, but that the inside party will send his ships out separately—on the same or on different nights—with orders to assemble at a given rendezvous. But will he? I at least am not so sure; for if on the one hand there is thus multiplied by six the chance of evasion for each ship, there is also multiplied by six the chance that one will fall in with the whole of the outside squadron. A single battle-ship of the present day is too valuable—in immediate money's worth, in importance to the general operations, and in the length of time required to replace her—to be so daringly, not to say recklessly, risked. The mere capture of one such ship would be no small night's work, equalling, as she would, in tonnage and in intrinsic importance to the operation before her, the five ships taken by Rodney on the 12th of April. I am not disposed to undervalue the advantage of the insider, in that he has the initiative—the advantage possessed by one who has the choice of time, whose different parties move on a pre-concerted plan, for a single, simple object (getting away), over one who cannot distinguish just what

is happening, which is the position of the outsider. On the other hand I feel that, in considering the possibility of effectively watching an enemy's port, which is the *rôle* of the outsider, one is likely, from his very point of view, to be over-impressed with its difficulties; and I am inclined to think that, if the problem posed were how best to win through the toils of a much superior and skilfully disposed outside force, imagination would succeed in making a similar vivid picture of the risks of running out—of the things that might happen, and the disastrous consequences that might thereupon ensue. Men will not in war undertake, with a light heart, adventures which in summer manœuvres entail no more grievous burden of care than a boy's game of hide and seek. Valuable as are the lessons of mimic warfare, there cannot in it be adequately reproduced the element arising from the sense of imminent danger.

Moreover, it should be remembered that, if the blockade has continued for some time, the escaping ships, despite the advantages otherwise possessed by them (clean bottoms, full coal, etc.) will have to do with vessels that have had nightly experience of embarrassments, which they themselves will be undergoing for the first time; a condition precisely analogous to that lamented by Villeneuve when he wrote, "They have not been exercised in storms"; or, as Nelson wrote of the same occasion, "These gentlemen are not used to the hurricanes, which we have braved for twenty-one months without losing mast or yard." Is anyone disposed to reckon lightly of the moral effect—that most potent spell—or of the trained dexterity, acquired by the mere habit of doing things in the dark, and under difficulties. Evasions, if undertaken at all, will not be on moonlight nights and smooth seas, but under conditions that will, to say the least, favour evasion. The same conditions will also, beyond all doubt in my mind, as far as their special influence extends, favour the familiar outsider rather than the unfamiliar insider.

It is clear that the difficulties of the outsider are multiplied manifold, if once the evading party is wholly lost to sight; hence it follows that the most strenuous efforts must be made not to let him escape without fighting. If I may, without affectation of pedantry, translate this proposition into technical language, it would read that the strategic necessities of the war demand that the area to be occupied by the outsider's fleet (*i.e.*, before the enemy's ports) be circumscribed to the tract consistent with due precaution against attack, and that there be concentrated upon it such a force as would render escape without fighting impossible. The retort doubtless will be that no one denies this, but that the very question before us is how to prevent the escape. Can any force, however numerous, be so disposed as to prevent a sortie being seen? If seen, can the news of the fact, and the necessary information as to direction taken, and the enemy's force, be so transmitted to the main body of the fleet as to give a probability of the latter intercepting the movement? If once seen, can touch of the enemy be kept? Can any change of direction he may make be also distinctly reported? In short, if such a movement is made and

discovered, and touch with it is once gained, can such touch be maintained until daylight, or clear weather, enable eyesight to resume its functions? After that the question becomes one of alternative speed, and possible accidents.

This series of questions, I apprehend, really states the problem under consideration. The question of relative speeds is not involved, it only comes into play if the fleets see each other, and one is trying to force action; it is, moreover, perfectly simple, as well as outside our problem. Neither is the relative fighting force primarily involved—the superiority of the outsider in this must be assumed—otherwise his attempt to play his part at all is hopeless. The question is simply one of touch, gained and maintained; of immediate and accurate information, and consequently of correct direction given to the party wishing battle. For this, numbers are primarily necessary. The scouting force of the fleet—its eyes, its cavalry—must be so multiplied, organised, and drilled that it can at one and the same time keep track of an enemy and go back and forth to its own main body. This being effectively done, the superiority of the latter comes into play.

Now, there is in this nothing original—nothing whatsoever. It is a mere re-echo of Nelson's cry—not only before the Nile, but at other times—"More frigates!" As a contribution to the question I was asked to treat, the answer I suggest amounts to no more than this, that it eliminates, in my opinion, all subsidiary and related subjects, and reduces the problem to the one simple, though great, difficulty in which I conceive it to consist. The maintenance of a close and sustained watch over a hostile port, of which we have two great types in St. Vincent and Cornwallis off Brst, and Nelson, under very different conditions and methods, off Toulon, involves many intricate problems. There are the questions of the aggregate purely fighting force to be kept up, its movements and position and all that pertains to its instant readiness, questions of supply, of reliefs, of repair, of reserve, difficulties consequent upon weather; but all these are separable, in thought at least, from the organisation of what I have called the cavalry of the fleet. The admirals of former days found it hard to exaggerate their sense of its importance, but the greater facility of movement accorded by steam certainly does make evasion easier than of old; consequently the look-out force must be more numerous, more swift, more systematically organised and drilled.

To make more than a general suggestion, to propose more than a general solution, to go on to propose classes of vessels, methods of operation, and so forth, would, it seems to me, transgress the proper sphere of an officer foreign to the service he is addressing, and for various reasons. Let me, however, recur to one remark already made. The answer I offer may be wholly unsatisfactory, may be a mere lame and impotent conclusion. I of course think that, carefully worked out, first, as to the tactical disposition most conducive to the end in view, gaining and keeping touch, and thence deducing the classes and relative numbers of the vessels needed for the various lines of the

blockade, from the outmost to the innermost, a very adequate plan can be evolved. It would have a general resemblance, doubtless, to the sentries, piquets, and supports, that lie between the main body of an army and the enemy; or, to quote a naval historical instance, to the method of the Brest blockade described by St. Vincent in his letters. But, as I have already remarked, unless the idea is futile—barren—its inadequacy demonstrated by experience or logic, it is not a sufficient reply to show that it may, by this chance or that chance, by this mistake or that mistake, incur failure. If a perfectly sure thing is required, I certainly have none to propose or advocate. Supposing a plan based upon the idea I suggest, or upon any other, the fair question to be asked by one weighing it, is not, "Does this make it impossible for the enemy to escape?" but, "Does this impose upon him such risks as to give a considerable chance of either stopping or crippling him if he attempt it?" And not only is this chance in your favour to be considered as to the immediate locality, but also as to its deterrent effect upon the enemy; and, consequently, the impediments raised by it in the way of any great combination, dependent upon the evasion taking place at a particular moment. As I have repeatedly argued in my book upon the Napoleonic Wars, it was not the certainty of stopping a particular evasion, but the high probability of frustrating a great combination, that made the distinguishing merit of St. Vincent's system.

The ease of movements both in time and direction, conferred by steam, again intervenes here to exaggerate, in my judgment, both the supposed facility of combinations effected from separated ports, and the assumed consequent danger incurred from them. Sight is lost of qualifying conditions. Men's imaginations, kept in constant activity by the scientific advances and inventions of the day, have developed abnormal agility, and mental pictures are drawn in which fleets get about as though by magic. The movements of modern fleets are in fact extremely hampered, and their scope restricted, by the very elements to which they owe much of their power. Their coal, ammunition, water, and supplies are immensely less, measured in duration of time, than the corresponding factors essential to the efficiency of the old ship of war. Nor are they thus fettered only by causes internal to themselves, but external conditions deprive an evasion of much of its former menace. Squadrons and divisions cannot disappear as completely, nor for so long, not even comparatively to modern conditions, as they formerly did. With a network of cables under the sea to neutral ports, where abide the consular agents of each nation, the need of renewing coal will make a fortnight a long time for a fleet to disappear from the world's knowledge. A fortnight, you will say, will allow much damage to be done. Doubtless, but not vital damage, if the enemy be decently prepared. It is not to be presumed that a maritime nation will allow its vital interests, home or colonial, to be so exposed that a fortnight's gain of time will prove fatal to any one of them; while, as for lesser interests, or smaller injuries, one does not go to war expecting never to get a shin barked or a limb broken.

I think that the consideration of the difficulty of effecting such vital damage will have a further deterrent effect upon the insider—the weaker party—and conspire with that exerted by the outsider's thorough arrangements, to gain and keep touch, to make him very wary and cautious as to what he attempts. Also of course, if the latter accepts Napoleon's dictum that "War cannot be made without running risks," or, as Jomini more strongly puts it, "After all, one goes to war expecting to take risks," he will not abandon plans of offence because there is difficulty in them, or because disaster may ensue upon failure. The weaker must be the more wary and the more cunning; but he should not despair, and should aim to be also the quicker and the more energetic. The outsider may be stronger before each port than the insider; but the detachment before each hostile port can scarcely be as large as the whole of the enemy's navy. The cruise of Admiral Bruix in 1799 is the conspicuous illustration of the opportunities which chance may offer; though it must be remarked that that chance was obtained, not by a mass formed by detachments combining at sea, but by one already gathered in a single port, from which it issued in mass. The intended subsequent combination with the Spaniards proved in fact a failure; it could not be effected, until after the possible offensive purpose of the cruise had been defeated, by the junction of the British divisions. "What a game had Admiral Bruix to play," said St. Vincent; and Nelson afterwards: "Your lordship knows what Admiral Bruix might have done, had he done his duty." The opinion of two such men, then on the spot, stamps beyond question the possibilities offered to the inside party, by chances inseparable from war. The attempt to close hostile ports against evasion is almost imperative upon a nation dependent upon the sea; yet if done less than efficiently—I do not say "absolutely"—it may quite possibly involve greater danger than leaving the ports unwatched, and simply keeping your own fleet massed and in hand, which was Lord Howe's plan.

In conclusion, I should be inclined to summarise the whole question somewhat in the following manner, which will doubtless involve a certain amount of repetition. Using the term "blockade" loosely, as the nearest single word to comprise any close watch over the entrance to an enemy's port, with a view to impede egress or ingress, such blockades are of a twofold character—offensive and defensive. The first is directed against both egress and ingress, but more especially against ingress, being meant to prevent the entrance of needed supplies, and being therefore essentially a blow at communications. The second also has a twofold aim, but its chief object is to prevent egress unmolested, because such freedom of issue to an enemy means danger, more or less great, to certain national interests; which, because they lie outside the national boundaries, cannot be protected by ordinary defensive measures, by fortifications and organised land forces. Such a blockade is, therefore, essentially defensive. Resort to it implies the existence of great national *external* interests, which are open to injury, and can in no other way be so cheaply, sufficiently, and certainly defended. If the external exposed interests

are many, it is impossible to imagine any means of guarding them equal in efficiency to that of heading off danger at its sources. This is the strategic necessity—the decisive strategic consideration, which dictates the method essential to be adopted. Resort to this method implies, besides the external interests, a naval strength so superior as to permit being before each port watched, in force superior to that of the enemy within. This is a simple question of preparation, which, however arduous it may be to the national resources, presents no intellectual problem difficult to be solved. It is a question principally of money, secondarily of preparation, not only adequate in the aggregate, but adequate in the discretion with which that aggregate is apportioned among the various branches of the fleet, based upon a due recognition of the part which each branch will have to play in a proposed blockade. Such antecedent appointment is as really tactical in character as is the disposition of a given force before a given port.

Further, to assign to a given blockade a fleet of battle-ships, superior in any required degree to the inside enemy, presents no problem perplexing to the intellect. The real problem is to assure a reasonable probability that that fleet can bring the enemy to action, if he attempt to come out. This is a matter of look-out, instituted and sustained, and of means of inter-communication between vessels of the blockading force—whether by signals or by hail. This is the crux of the matter, and it is one so intricate and onerous, subject in execution to so many mishaps, that I do not wonder it should seem insoluble. Without due personal experience, I speak with utmost diffidence, but I believe that by the employment of extensive means it is possible to attain, not certainty, but that degree of probability which, both in actual result and in its deterrent effect, would largely insure the end in view, the protection, namely, of the external interests of the country. The question involved is the defensive watching of a given front of operations. The system must resemble in general features that of an army similarly engaged. Nearest the enemy the units of force must be small, and their commanders deeply impressed with the sense, not only of the need of quickly gaining and sending information, by whatever means, but also and still more that the safety of their individual commands is as nothing to the performance of the duty assigned. Why, even, should it be thought improbable that a resolute attack upon an issuing force, by the look-out lines, though necessarily inferior, should so embarrass or injure the enemy under the difficulties of night, as to gain time for its own main body to come up—or else might frustrate the movement by the resultant confusion? Certainly it is contemplated, on all hands, that attacks by torpedo-boats from inside will be one of the greatest anxieties of a blockading force; why should it not in a degree concern one trying to run out? In land warfare, inferior force often retards or disquiets movements which it is inadequate to prevent; can no ingenuity figure analogous use of naval force? Many things go to constitute inequality besides physical or material strength—position, opportunity, accident, chance, a happy

inspiration. There is nothing in the essential nature of war which makes improbable, under any change of ships or weapons, that there should be repeated the part played by the frigate "Penelope," in impeding and ultimately frustrating the escape of the 80-gun ship "Guillaume Tell" from Malta, in the year 1800. A party whose one aim, for whatsoever reason, is to evade, is sorely hampered in its endeavours to shake off even a much inferior foe. The fear of the delay entailed may prevent it from resorting to measures which, under other circumstances, would soon crush the petty intruder.

In short, to summarise once more in a sentence, the question—the old question and the new alike—is not, "Can any enemy be prevented from coming out?" but, "If he does, can touch with him be gained and preserved?" Steam, in my opinion, has simply widened the question, not changed its nature. I believe that provision can be made which will give a high probability of success, but I do not believe in certainties in war.