On the Training of the Executive Branch of the Navy

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To cite this article: Captain Gerard H. Noel R.N. (1889) On the Training of the Executive Branch of the Navy, Royal United Services Institution. Journal, 33:149, 803-826, DOI: [10.1080/03071848909418084](https://doi.org/10.1080/03071848909418084)

To link to this article: <http://dx.doi.org/10.1080/03071848909418084>

Published online: 11 Sep 2009.

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Friday, May 17, 1889.

ADMIRAL OF THE FLEET THE HON. SIR HENRY KEPPEL, G.C.B.,
Vice-Patron, in the Chair.

ON THE TRAINING OF THE EXECUTIVE BRANCH OF THE NAVY.

By Captain GERARD H. NOEL, R.N.

1. *General Considerations.*

THERE is a natural feeling in the Navy that naval Officers should have a voice in the decision of the types of vessels they may be some day called upon to take into action, and there is so much controversy on this subject that the still graver question of the training of Officers and men to man and fight these ships is allowed to fall into the background. The answer of an Admiral who had full confidence that those under his command were thoroughly trained to a sea life as men-of-war's-men would be: "Give us any sort of vessels, so long as they are seaworthy, and we will fight them;" in fact the training and efficiency of the personnel should be the naval Officers' first and principal care.

In September, 1885, four corvettes were commissioned for the Training Squadron, the purpose of which is to train young Officers and seamen in the practical duties of men-of-war's-men at sea. In former years similar squadrons of exercise, under the less expressive but more poetical title of "Flying Squadrons," have been periodically organized and kept cruising, not, perhaps, so much with a view to the training of young seamen as to the employment of Officers and men in time of peace. The existence of these squadrons came to an end in the summer of 1882, and by many Officers it was regretfully supposed that the Navy had seen the last of them. But the Boards of Admiralty under the present Government, with wise foreknowledge of the absolute necessity for retaining in the seamen of the Fleet the attributes of a sailor, and that experience of sea-life, without which a man-of-war's man is of little practical value, determined to re-establish the squadron on a more effective system; hence the formation of the present Training Squadron.

The advocates for the abolition of all that was formerly known as seamanship, who would sweep away every stitch of canvas, and every spar that was not required for military purposes, were not pleased

with what they considered the retrograde step of re-introducing a system of training men as sailors; and so confident were some of them that seamanship was a thing of the past, that they were inclined to shut their ears to all arguments in opposition to their favourite theories, and to console themselves that such opposition must soon die a natural death. It is partly in the hope of awakening in these Officers a sense of the real situation, and of conveying to whoever may hear this paper a view of the other side of the question (for so often the condemnation of everything that is not machinery is dinned into the ears of the public), that this paper is humbly submitted for consideration.

Supposing, as it is here asserted, that the first care of a naval Officer should be the efficient training of the personnel of the Navy, let us consider how it is best carried into effect, and in doing this it is proposed to treat only of the Executive, and not to refer to the Civil departments, all of which, including that most important branch, the Engineers and stokers, are composed of specialists, only differing from their comrades in other employ through being subjected to a more rigorous discipline, and in most cases entrusted with greater responsibilities.

We have to train the naval Executive in such a manner as to make him in the highest degree capable as a man-of-war's man; how is this to be done? First, let us imagine what his duties would be in time of war.

In a naval war our ships would be constantly at sea, probably only putting into harbour for repairs or coaling. They will be frequently damaged through action with the enemy, collision, or grounding; losing anchors, davits, boats, and spars, all of which should be, as far as possible, immediately, though, perhaps, temporarily, replaced. They will frequently have to send away boats on various services, and, let us hope occasionally, parties as prize crews. Coaling, often under great difficulties and with the greatest possible celerity, will be a constant necessity. They will occasionally fight in a general or an individual action; and sometimes (when there is no danger to the ship itself) they will be required to land all available men for service ashore. They will often have to take other ships in tow, or render them assistance. Away from naval ports the Executive will have to improvise methods of removing disabled guns and replacing them with others, for the transport of heavy boats, and for innumerable minor duties with regard to the supplies required for the Fleet, all of which will have to be done with the utmost speed.

In order to accomplish these duties effectively, the general ideas for the training of the Executive may be summed up as follows:—Officers and men should be entered young (this has now been done for many years); Officers and men should have the maximum of sea experience; Officers should be constantly in charge of men, and giving orders to them, and the men should know how to obey any order they receive with alacrity; skill in handling men should be attained by the Officers, smartness and handiness be attained by the men; acute vigilance should be practised by both Officers and men,

and the power of detecting the least sign of anything going wrong; accurate observation, especially as to the appearance and movements of other ships, should be cultivated; an intelligent comprehension of what dangers are to be apprehended, and the best means of warding them off, is invaluable; a general readiness of resource, which can only be gained by experience, is most desirable; activity and fearlessness are indispensable. Thorough efficiency in boats, and on the part of the Officers in the management of their ships, is essential; and last, but not least, a thorough knowledge of the use of arms, and for the Officers in addition, a proficiency in commanding batteries, or parties of men under arms, is of very great importance, training for which should commence from the earliest entry.

Having thus sketched the principal attributes which the Executive should possess, it is proposed in this paper to point out that without the use of masted ships the requisite training is unattainable.

2. *Entry and Training.*

The present system of the entry of cadets and training of young Officers is satisfactory so long as the youngsters are kept up to the mark in sea-going ships. The tendency to make too much of school-work at the expense of other more important matters is to be regretted. Boat work and close attention to the duties of the ship—giving the boys responsibilities from which they gain self-reliance—and such training as will fit them eventually for the important duties of command, and those of executive Officer, should never be disregarded; navigating and signal duties, &c., should be closely attended to—in fact, the three years of a midshipman's service before passing for Lieutenant should be more devoted to learning his duty as an Officer than to anything else. At present, by a wise provision, the last year or six months of this time is usually passed in the Training Squadron. More elaborate instruction in steam, and actual work in the engine-room and stoke-hold, have recently been ordered for young Officers; this, no doubt, will have a beneficial effect, both in giving the Executive a better knowledge of machinery, and in rendering them more capable of some day commanding vessels in which perhaps one-third of the crew will belong to the engine-room department; but it must not be supposed that the Executives are required to become Engineers, any more than that the Engineers are required to become Executives; both have their clearly defined and separated duties. Such is the amount of machinery now put into ships that it is increasingly necessary that the Executive should be trained to its use, and for the same reason it is more than ever important that mathematics should be the most prominent part of a naval Officer's education. All seamanship is associated with the working and utilizing of forces, and may be termed mathematical; it generates in the student the principles of applied mathematics, so that whatever is the source of power, a well-trained seaman soon adapts himself to its proper and most effective use.

Lieutenants when first promoted (especially those who earn early

promotion by doing well at their examinations), are, after their long periods of instruction at Greenwich and Portsmouth, usually very deficient in sea-going knowledge; the sooner this is rectified by appointing them for service at sea the better, and it is not advisable to allow them to take up one of the special branches until they have shown themselves thoroughly capable as Officers of the watch. Of these special branches, such as gunnery, torpedo, and surveying, only a few words are needed. It is certainly necessary that a select few who show great aptitude for scientific pursuits should have every opportunity and encouragement in becoming experts in their special line, so that they may eventually fit themselves for filling the positions of the highest authorities on these matters. Apart from this staff of specialists, all other executive Officers should be more or less trained alike, their courses of gunnery and torpedo work should qualify them to perform the necessary duties on board a commissioned ship, and every Officer should be well acquainted with the duty of navigating, although in this last branch the aptest should be selected for the more important appointments.

No one doubts for a moment that it is desirable that our Service should produce men of highly scientific qualifications in the gunnery, torpedo, and surveying branches; but whatever may be their other merits, the most valuable men in time of war will be those who can best command, handle, and fight their ships, in fact, the best seamen—the aim of all training of the Executive should be to this end.

The Captain who will best handle the ship of the present day, and fight her with success, will be one who possesses the maximum of sea-going experience, the power to command, and a clear-sighted understanding of his means of propulsion and his powers of offence and defence. Sea-going experience, and power of command, are only gained by a life's study, the other items are mastered by carefully following the ever-changing systems of the day, being familiar with the nature and direction in which progress is likely to be made, so that when once in commission he can readily understand the peculiarities of his vessel.

The entry of seamen as boys, and their first training in drill-ships and brigs, is all that can be desired; from the drill-ships boys are now drafted to the Training Squadron, in which they serve until the age of eighteen (when they are rated ordinary seamen), and to which some return later on to serve another six months as ordinary seamen. This last period is not always carried out, partly because the present Training Squadron cannot accommodate sufficient numbers, and partly in consequence of the men's services being required in other ships; but this training so far as it goes is most beneficial. From the age of eighteen men engage to serve twelve years; the smartest of them qualify for A.B. at about the age of nineteen, and the others with few exceptions before they are twenty-one. It would be a great benefit to the Service if these three years (*viz.*, from eighteen to twenty-one) were passed in masted ships at sea, with this exception, that those who have obtained the rating of A.B. under the three years should be allowed to qualify in gunnery in one of the home gunnery

ships out of that time; but until they have had three years' man's time in masted ships—that is chiefly in the Training or Channel Squadrons—it would be well to consider them as not eligible for home service or mastless ships. Having acquired this amount of sea-going experience, they would yet have between eight and nine years to complete their first period of service, and from the time of completing the first three years' sea-time, all (with the exception of those few required to fill the higher ratings in masted ships) would be available for manning the more modern types of vessels; the least intelligent as man-of-war's men being employed in troop-ships.

The greater part of practical torpedo work is closely allied to a seaman's ordinary duty, and there is no reason why the splicing and fitting of electric cables, the working of torpedo nets, and indeed everything except the handling of explosives, should not be introduced into the earlier part of seamanship training. Gun, rifle, and cutlass drills are all part of the training routine, and as the Channel and Training Squadrons are composed of fully equipped war-ships, the necessary amount of these drills is carried out, so that even the youngest seaman is not strange to the weapons with which he may have to fight.

It has also been suggested that the crews of some of the Channel ships should be occasionally turned over to the mastless battle-ships and cruisers, which are in readiness at the home ports, for a few weeks' training in the summer months.

After the period of sea-going training referred to above, the seaman should be in all respects able-bodied; he is twenty-one years of age, and perhaps already a leading seaman, or even a petty officer; now is the time to fit him for his duties in the battle-ship of the future, to practise him in such matters as the use of machinery in connection with his duties, the exercise of guns of very heavy calibre, the working of torpedo-boats, and in fact all the more modern appliances of naval warfare, with which he may not before have been acquainted.

Since training for war service must never for a moment be relaxed, the seamen employed in mastless ships should be kept up to a state of proficiency and smartness by constant boat-work and whatever may be devised in the way of gymnastics, besides the gunnery and torpedo work and the ordinary duties of the ship; they would be also much benefited by occasionally having a few weeks' cruising in the local sailing cruisers, if it could be conveniently arranged. Another very important item is the training in signalling duties, which should now be gradually incorporated with the other branches of a seaman's training.

The gunnery and torpedo instructions carried on in sea-going ships cannot be too carefully attended to, and no cessation in the drills should be permitted until the crew of a newly-commissioned vessel is in every way prepared to take their ship into action. Waste of ammunition in carrying out the quarterly practice is reprehensible; great care should be taken to obtain the utmost possible benefit from every round that is fired. The imperative necessity of getting a damaged gun or other weapon again into action, without delay, should

be impressed upon both Officers and men. The term "obsolete," which is so readily applied to the matériel of the Navy not immediately of the present date, has the demoralizing effect of rendering the men dissatisfied with, and callous as to the efficiency of any arms or gear that are not of the latest pattern. It should be distinctly laid down that nothing is obsolete which may be required for use in time of war, and that it is greatly to the discredit of all concerned if any part of the fighting plant, old or new, is allowed to get out of order through any shade of carelessness or neglect.

The use of masts and sails is sometimes compared with that of a gymnasium, but those who think seriously on the subject must perceive the difference, for in a gymnasium intellect is not particularly required, whereas in the smart handling of sails and spars it is indispensable, and indeed its absence may endanger all concerned. In order to make a man-of-war's man, there is no training compared with that of seamanship proper, as carried out in a masted man-of-war; it practises Officers and men in all the attributes which will be of the greatest value in time of war, viz., intelligence, smartness, fearlessness, readiness of resource, and activity, and (with the Officers) in power of command. It is invariably the case that the ablest and smartest seamen make the best and most reliable gunners; not perhaps the best gunnery instructors, for in them a quality rarely found in a good seaman is requisite, namely, the power of committing to memory long pages of drill detail, and of subordinating their own intellects to the subject-matter they have to teach.

The working of war-ships under sail is the nearest approach to what will be experienced in time of war. For instance, on board a ship in a squadron working into, or weighing from an anchorage under sail, every soul on board must be on the alert, any neglect or wrong order given may cause at least great confusion, and perhaps serious accident, and all on board feel that unless the work is properly done they will be the sufferers, probably having to anchor or to weigh anchor again, or make good some serious defect.

If it were possible to set the present types of modern fighting ships to the work they will experience in time of war, ramming the enemy, colliding, grounding, being damaged by shot and shell, their crews replacing disabled guns, hoisting boats in and out in dangerous weather, rigging jury rudders, taking disabled ships in/tow under difficult circumstances, &c., we could dispense with the training afforded by masts and sails, but as this is impracticable we have no other means of training our Executive, in order to render them capable of coping with such difficulties, than that of endeavouring to make them *seamen*, and as such by battling with the elements to develop the readiness of resource and self-confidence in critical moments which is indispensable to enable them to meet the emergencies and accidents of war. Sails are not in the question, except as a means to an end, but an indispensable means, for which no other could be an effective substitute. Captain FitzGerald, in a paper on "Mastless Ships of War," read at this Institute in 1887 (see Journal, vol. xxxi, p. 121), having condemned sail drill, &c., could only suggest, in lieu,

that men "could be given so many hours a day to fiddle with the live heads of Whitehead torpedoes with the detonators in; or they could be set to work to hammer sensitive fuzes into filled shell," but of course this is not meant seriously; nevertheless, what has baffled Captain FitzGerald has baffled all others, for there is no substitute, and the only alternative is to allow the man-of-war seaman to become extinct. Imagine the Officer in command of a ship in war-time, who had no one on board he could depend upon to steer a course, to obtain soundings, to man a boat under difficulties, to work tow-ropes, to rig a derrick, to improvise any purchase in lieu of some damaged machinery, to secure a torpedo boom broken adrift, or even to clear a flag foul aloft on the military mast; how he would bless the so-called reformers who had abolished sailors!

3. *Squadrons of Instruction, &c.*

In time of war our fleets will be composed of all available ships, many of which will be of the latest types, powerful steamers without sail power, whose crews will consist largely of stokers and marines with a nucleus of seamen proper, and a full number of executive Officers. In fighting the guns, in repairing damage, and in doing the innumerable duties (coaling, provisioning, boat-work, &c.) upon which the fighting efficiency of the ship mostly depends, a Captain will have to rely chiefly on the ability and men-of-war's-man-like qualities of the Officers and seamen under his command, and the Navy which can display the most of these qualities will have the advantage. In times of peace the ships principally required for sea-service are those that can accommodate the largest crews, and that in a healthy manner, providing for both Officers and men sufficient employment of such a nature that the Officers have constant experience in commanding men, and in carrying out all kinds of intricate evolutions, and that the men have constant opportunities of using their intellects and learning how to carry out orders with alacrity and precision. For this purpose masted ships with good accommodation should be employed where practicable, and kept cruising as much as possible under sail.

The Mediterranean Squadron is necessarily composed of modern mastless ships (sails being of no use on that station), which would with a few additions form a powerful war fleet; and on other important foreign stations there will shortly be a fair show of modern vessels. As these increase and the older vessels are withdrawn, the necessity of providing for more training accommodation for Officers and seamen will probably be met by increasing the number of ships in the Training and Channel Squadrons. It would also be advantageous, if sailing training ships, such as the "Cruiser," now at Malta, could be attached to our squadrons on other stations as well as the Mediterranean; for instance, one might be stationed at Bermuda, and cruise in the West Indies in the winter, another at Hong Kong, cruising as far as Japan in the summer, and perhaps a third in Australia, all being employed in doing similar good service

to that performed by the "Cruiser," a vessel, for the benefit of a few weeks in which, many a midshipman has need to be thankful.

It is often asserted that the Channel Squadron should form the nucleus of our principal war fleet in home waters, and should therefore be composed of the latest types of war-vessels, which latter, it must be borne in mind, being mastless, carry very few seamen, and as powerful steamers are not suitable for long periods at sea at slow speed (in peace-time), or much use for training the seamen class even if so employed, would it not be a better policy to make the Reserve ships the nucleus of our home fleet, and to let the Channel Squadron consist—as at present—of the older ships with plenty of accommodation, and the means of keeping their large crews in healthy exercise?

Imagine the home fleet consisting of the coastguard ships, each a battle-ship of modern type, having attached to her a vessel of "Mersey" or "Melpomene" class, another of "Rattlesnake" class, and two torpedo-boats, manned when at her coast station by a reduced crew of trained seamen, marines, stokers, &c., and able at twenty-four hours' notice to complete her crew, and those of her satellites from the coastguard men of her district, and be on her way to the rendezvous at any port in the Channel. Here you would have a splendid and fully equipped fleet, manned in a most efficient manner, and ready for service; so organized that when not called out, the crews of the ships in their reduced state would be sufficient to keep everything in perfect order.

Again, imagine a Channel fleet of six or perhaps eight such ships, as "Minotaur," "Hercules," and "Triumph," intended to carry on the training of the younger Officers and seamen, principally with the view of accustoming them to a sea-life. Periodically these ships might be brought to the home ports, and turned over to modern fighting ships, each of their large crews being divided so as to man two or more of these vessels for a few weeks' cruise in the summer.

The Training Squadron is at present doing admirable work, although it can hardly accommodate a sufficiently large number of men to achieve the desired amount of training. The ships of which it is composed are the best of the older cruisers, and as they are fairly good steamers and well armed, there is no fear for their safety should a naval war be suddenly forced upon us. They are well masted enough to enable them to make a good passage under sail, and their accommodation is satisfactory, the four ships carry about 1,400 men all told, of which about half are ordinary seamen and boys under training. The work devolving on the Commander or First Lieutenants of these ships, augmented as it is by the frequent changes of Officers and men, and the constant training duties, in addition to usual routine work, is very arduous, and these Officers deserve every encouragement. The petty officers have also much more work than in most ships, owing to the youth and inexperience of those under their charge, who require continual instructive supervision. The work of the other Officers is nothing out of the common, beyond the fact of these ships having about double as much sea-work as any others.

Besides the instruction in seamanship which is in constant progress, the ships of the Training Squadron are exercised in naval tactics either under sail, or when steam is raised, under steam; the new signal books have been thoroughly studied, and it may truly be said that more signals are made in this squadron than in any other.

During the first three years in one of these ships, the "Rover," 482 ordinary seamen and 362 boys had an average of six months' training; 44 midshipmen served on board the ship, of whom 30 passed for Lieutenant in seamanship (10 obtained 1st class certificates, 12 2nd class, and 8 3rd class, two midshipmen being turned back). During this period the squadron accomplished the distance of 55,432 miles in 11,070 hours, of which 32,210 miles and 7,463 hours were under sail. Eighty ports were visited, the squadron arriving or leaving under sail alone 53 times, occasionally under difficult circumstances. As a specimen of the sailing qualities of the squadron, on one occasion the passage under sail from Teneriffe to Barbados, a distance of 2,580 miles, was made in 16½ days, an average of 156 miles a day; on another occasion the squadron averaged under sail 200 miles a day for 9 consecutive days, completing a passage home from Bermuda in 19 days.

The cruising of the Training Squadron in the West Indies in the winter, and in the Mediterranean, Baltic, and home waters in the summer (during which the squadron twice took part in the fleet manœuvres), was a varied experience of work, interest, and pleasure; many interesting foreign ports were visited, where the Officers had the opportunity of seeing the ships and dockyards of other navies, and were everywhere received with the utmost cordiality and good feeling; in fact, anything more instructive and generally beneficial to both Officers and men than service in the Training Squadron cannot well be imagined. There is reason to hope that the squadron may some day be increased in number, or what will be even better, that a second squadron similar to the present one may be fitted out.

4. Conclusion.

The opinions expressed in this paper as to the importance of seamanship training are thought by some people to be old-fashioned and inapplicable to the present day. That these or similar opinions were held by our forefathers there is no doubt, and it was through the strict adherence to them that former great naval commanders earned the name of being the best seamen in the world, and as such, carried all before them, making our country what it is now. Are we to lightly barter away the heirloom of their prestige? Is there any reason why England should not still boast of at least giving her naval Officers the opportunity of being the most experienced seamen in the world? If to be experienced seamen is out of date, we may find to our cost that winning a naval action is also a thing of the past.

It is believed to be a fact that none of the principal ocean steamship companies will admit an Officer into their employ, unless he has

served an apprenticeship of four years in square-rigged sailing ships, and some companies go even further, and will only take an Officer who has commanded a sailing vessel. What the shipowners find is that a youngster apprenticed in a steamship learns how to clean bright work, but practically little else.

The reasons for the unpopularity of seamanship proper are not far to seek: in the case of some Officers—we hope but few—the real fact is that they do not like work, and in masted ships on long cruises they are not so comfortable as in mastless ships constantly at anchor or alongside the dockyard wall. The voices of these gentlemen are frequently heard in the Service papers, deluding the public into the belief that theirs is the advanced view of naval matters. Another class of objectors to seamanship training is found in certain Officers of the scientific branches, who devote themselves so entirely to their own particular work (often to the great benefit of the Service), that they lose sight of, or even ignore the necessity of employing means for the purpose of training which are foreign to their sympathies, forgetting that hitherto we have only employed Officers and men who have been brought up as seamen, and that we have no experience of what is to be expected if their training as such, ceases. It is notorious that no other means of training is suggested by these Officers beyond a vague assertion that the personnel ought to be trained in the vessels which they will have to fight, which apparently implies maintaining our Fleet on a war footing. Again, a third class of opposers to seamanship training is composed of those who, on political grounds, would insist on the pushing forward of modern ships, and—disregarding training—are satisfied with the personnel so long as it is numerically sufficient, feeling (and perhaps with reason) that while the older ships are employed, and men-of-war's men are trained as sailors, there will be so much less money to be spent on the newer vessels of the war fleet. This party includes in its numbers some of those Officers who have completed their term of service, or who, for other reasons, have no further prospect of commanding our ships or fleets, they therefore are apt to drop out of their reckoning the importance to a Captain of having with him experienced Officers and seamen on whom to rely in time of war. The cause of objection of this class deserves attention, its remedy, however, is not found in sacrificing one great object to attain another, but rather in so providing for the wants of the Navy that neither the personnel nor the matériel should suffer; and by a judicious organization the war fleet be periodically mobilized, while the time during which it is not mobilized should be passed by at least the younger Officers and seamen in healthy and beneficial employment at sea.

There is undoubtedly in nearly all experienced naval Officers a latent, if not an active opinion, that seamanship in the sense suggested in this paper is still necessary, latent and unexpressed by some because they are fearful of being classed as out of date; but is the withholding of such opinions beneficial to our Service? It is to be hoped that those who honour this paper by joining in the discussion will throw off all reserve; and if some speakers do not possess even a

latent regard for seamanship, they will not express their objections in vague terms, but will suggest some definite alternative either for the training of the Executive or for its reorganization.

Lieutenant HENRY CHAMBERLAIN, R.N.: Mr. Chairman and gentlemen, the subject of naval education appears to me to be essentially one in which Officers below the age of fifty certainly should mainly interest themselves, because if they now are in active service as Captains or Commanders, in a very few years' time the fleets officered by young officers will be entrusted to their care, and if those Officers are not sufficiently trained, they (the Admirals) will suffer probably like Admiral Byng suffered in the last century, and on their shoulders will fall the terrible weight of inefficiency which is not due to them, but to the fact that the subject of naval education is looked upon at present as of secondary importance. It is really of primary importance. We have at last discovered that we have not enough ships, and are going to build seventy more, but we have not got sufficient officers to begin with. Supposing, however, for the sake of argument, that we had them, let us look at the suggestions that are brought forward in this paper. The first thing which strikes one is that we had better get our definitions. What do we mean by "seamanship"? We talk of "sailors," "seamanship," and "seamen." One man means one thing and another man another thing. In my private opinion "sailors" are essentially men who have passed away. There are no "sailors" in the strict sense of the term, any more on the active list, or hardly any. Without disrespect, if I may say so, there are hardly any "sailors" of the olden days left; but I should be extremely sorry to say that there are not very good "seamen." They are very distinct people from "sailors;" as distinct as chalk from cheese. "Sailors" no longer exist, but *seamen* may exist to the end of days. As long as the sea exists, so long seamen will exist. There will be always machines to put on the sea, which you call "ships," which people will be able to manage in all winds and weather; to run them into one another if they are enemies, and to keep clear of each other if they are friends. These men are seamen. We are rather apt to be down on our luck on this question, and to think that seamen are passing away. They have not, and they need never pass away. The young men of the present day have as good intelligence as their fathers, or even their grandfathers, and you have as good material now as ever you had before in the Service. That is a statement made by Admiral Sir Geoffrey Hornby, who, I suppose, is one of the best Officers in the whole Navy, and he says, "You have as good material now as ever you had;" but he adds as a rider to his statement, "You have splendid material, and you make absolutely no use of it." You have intelligent young men, you admit them at fourteen, but you do not train them. Talking about this question of training, it is a very good plan to begin at the beginning. Captain Noel, of course, is dealing with a very large subject, but I wish to ask this question—Had we not better begin at the beginning, and train our young Officers from the day of their entry? Scarcely a single reference has been made to the inefficiency of the present system of training, and the possible efficiency of a modified system. As a matter of fact, it is impossible to attain the objects laid down in this paper unless you make a *radical change* in the whole system of training, beginning at the age of fourteen. Captain Noel says, "The three years of a midshipman's service before passing for Lieutenant should be more devoted to learning his duty as an Officer than to anything else." Quite so. Everybody rightly said "Hear, hear" to that statement, but how are we to do it? I know an Officer, present in this room, who has a son in the Royal Navy. The boy is on the East Coast of Africa, where all day long he is away picking up valuable experience in open boats, employed possibly against slave dhows. With ten or twelve men, you come suddenly on a slave dhow, and on such an occasion the intelligence, the pluck, the decision, the forethought, everything which makes a young seaman, would have to be brought into play at a moment's notice. What is happening to that boy? Every week that passes over his head is so much time *lost*. Why? Because, under the present system, he is not under a Naval Instructor but is away in a boat. The actual fact of the matter is that these midshipmen on the

East Coast of Africa are going to be recalled and put into these large ships. They are going to be removed from the sphere of experience to be put into the sphere of theory, because if they are not taken away they may only obtain third classes at Greenwich, and your best Officers will be delayed in promotion, while your least good Officers will be promoted rapidly. Now the father of this young boy is an extremely able Officer, who belongs to the old school, but he also has gone with the times, so he is saying this: "I know that from a seaman's point of view it is bad that my boy should leave his present ship, but I know from the man of the world's point of view it is a good thing that he should leave that ship. Which am I to do, to ruin his career, or to make him 'no sailor'?" Which would you do? Which would any father in the room do? He would chuck the seamanship overboard, because he does not want to ruin the boy's career—and there is the evil of the whole system. You have a system at present which works extremely badly, and which every year works a little worse, which not only is condemned by outsiders, who see the most of the game, but is also condemned by the intelligent Sub-Lieutenants themselves. I have spoken to them, and said, "Putting all prejudice on one side—for we are all old Navy and are all new Navy—what do you think you know about seamanship? What have you had the opportunity of learning?" This man whom I was speaking to, a very intelligent "Sub," said, "To tell you the honest truth, I do not know much, and for a very good reason, that I have never been taught." But whose fault is that? It is the fault of the system. If he is taught it (*i.e.*, seamanship) his career is jammed, because he gets a third class at Greenwich, and if he is not taught it, he is perhaps put, at the age of twenty-one, on board a ship, an ironclad, which has cost half a million, without having had any experience. In the old days, in the days of our gallant Chairman, a lad at the age of seventeen knew more seamanship than our Lieutenants of four years' standing. I say with all confidence that that is a great scandal, and we must alter our system. You referred, Sir, to a damaged gun, and you said that now-a-days a seaman could not replace a damaged gun. I think it is only fair to the seaman of to-day to say this: if Lord Dundonald was sitting there he could replace his gun, because two fellows could lift it, and even forty years ago the guns were mere toys compared to what they are now. If a gun gets damaged now, the best seaman in the world cannot lift it with the appliances on board ship, not the very heavy guns, therefore how could they be removed and replaced? What purchase could you get to lift your very heavy guns on board any ships? Even if you had masts you could not trust to masts. It is not a question of seamanship, therefore, but a question of dead weight and "purchase." The size and power of the man has remained the same, but the weight of the gun has increased in an alarming proportion, so that I do not think it is fair to the seamen of the present day to say that they could not replace their guns. The lecturer refers to seamanship in this way: "Imagine an Officer in command of a ship in war-time who had no one on board he could depend upon to steer a course"—a "course" is steered by compass; and masts, yards, and sails are perfectly unnecessary in order to impart such knowledge to our men—"to obtain soundings"—this is done by using a lead-line, and no masts are required in order to instruct a man in the art of taking soundings—"to man a boat under difficulties"—no masts required in order to do this—"to work tow ropes"—you can tow a derelict without masts—"to rig a derrick"—a derrick requires no masts beyond one, which would take the topping-lift; I believe I am right there—"to improvise any purchase in lieu of some damaged machinery"—purchase can be improvised without absolute masts; purchases are made with ropes and blocks; if you will go to Woolwich you will see some marvellous purchases for lifting these 63-ton guns—"to secure a torpedo boom broken adrift"—that requires no mast, or certainly not more than one military mast—"or even to clear a flag foul aloft on the military mast"—well, that requires a man, as we all agree, who has had training, and for that you require more gymnastics. As regards training squadrons, the training squadron is an absolute necessity for maintaining our supremacy at sea as a fighting Power, not on account of the sails, but on account of the scientific intelligence, the originating power, the general activity and bodily health acquired by trained men. I think that these training squadrons are most useful for that. I hope that they will continue so.

Admiral Sir GEORGE WILLES, K.C.B.: Last year I met Captain Shaw, of the Fire Brigade, when he informed me that he had ceased to take men-of-war's men into his Fire Brigade, because they had lost their character of agility. That being the case, you may imagine with what pleasure I have heard Captain Noel's address. I agree with him in nearly every point. The Training Squadron has been of immense utility; the First Naval Lord deserves great credit for having had the moral courage to re-establish it. There is no doubt a large number of my brother Officers (I say it with regret) who ridicule the idea of a ship with masts, and spars, and sails, under any circumstances, but I maintain they are wrong, and if we want to keep up the character of the British sailor we must retain masts, and spars, and sails, but for training only. Of course, with an increased Navy, instead of four ships there must be at least six, but that is a detail. Captain Noel has carried us up to the point of the men quitting the Training Squadron; I rather regret that he has not gone further, because there is no manner of doubt that any great measure of success in our battles of the future will be due to the most skilled gunners. I have had the opportunity of watching what has been going on in the training of our men, and I really think it is most faulty. When the "Excellent" system was first established we had not a standing Navy, and it was arranged that a sufficient number of men should be trained, so as to get a captain for every gun, and enough men to work the magazines; but in 1852 we established a standing Navy, when we ought to have amended the whole system. Many of you would hardly believe it possible, but our men are still divided into sheep and goats, and any young man who has been a bit of a scamp, and some of us, I have no doubt, have been scamps in our time, is sent to sea before he has become a skilled gunner. What is the consequence? The number of young men whom I had to get discharged from the Navy during my period of service at Portsmouth really pained me, and chiefly for breaking leave. Whereas these young men, these scamps, would be just the men we should be glad to have in battle. They are trained at great expense and then discharged; whereas, if the sheep and the goats were all mixed together, the latter would forget all their troubles, and most likely turn over a new leaf. Many of them would marry and settle down. There is another point Captain Noel has omitted, another very important question—*stokers*. Nothing can be worse than the training of our stokers. I was not out with the ships last year, but I read in the newspapers, and I read that most valuable report of my three brother Officers, which stated that there was a great want of trained stokers in the Navy. Now you cannot train a stoker under two or three years, and you cannot train them without driving your ships at full speed. I do think it is necessary that we should follow—I am not too proud to follow—the Italian Navy, and adopt their plan, and keep one or two ships constantly running out to Malta and Gibraltar at full speed. What is the use of talking about a ship being able to steam 18 knots, when you have not got the stokers to drive her at that speed? It is absurd. With regard to the Officers, I would make one suggestion: there is no doubt that the young Officers of the present day are a splendid set of young men; but I think they want a little more, I might say a good deal more, sea-training. I have always thought that when they quit the "Britannia" the naval instructors might be left behind, and that for the three or four years they are away the boys might learn seamanship; going away in their boats teaches them something better than working in the fore cabin. But it is said, "Oh, but if you interrupt their studies they will not get five first classes. Really, I do not much care about it; I am thinking of the Navy of the future; I want to have fighting men and fighting Officers, and that cannot be learned by studying *x*.¹ A gallant friend of mine, who, I am sorry to see, has left the room, and therefore perhaps I ought not to quote him, said, very truly, many years ago when he was pressed, that the success of an encounter depends a good deal more on

¹ It is, of course, necessary to have a proportion of Officers with high scientific attainments. After the examination for the rank of Lieutenant (which should not occupy more than a few months), young Officers who have a talent for mathematics should be allowed to study at Greenwich. A great deal of time is now wasted in cramming those to whom it is distasteful.

the stomach of the Captain than on anything else, and he never said a truer word. Well, but stomach can only be acquired by experience; it is impossible without sea training. You would scarcely believe it possible, after what our gallant lecturer has said, that a Commander was lately appointed to command a ship who had not been to sea for ten years. Well, no insurance office would insure a merchant ship under such circumstances. Gentlemen, I won't detain you longer. Unfortunately circumstances have prevented me from attending any public meeting during the last five or six months, but I should like to express my grateful thanks to those gallant brother Officers of mine who have agitated and brought about such a grand increase of the Navy. I am sure you will all join with me in expressing our thanks to them. There is no doubt of this, that without a powerful Navy England will be lost. There must not be a question of an enemy landing on our shores: they must not be allowed to land! I see a gallant General here, who will forgive me for saying that if the enemy does land, *corps d'armées* will be of no use; it must be a question of the command of the Channel.

Captain The Right Honourable Lord CHARLES BERESFORD, C.B., M.P.: I think the thanks of the whole Service ought to be given to Captain Noel for this paper. It is impossible to conceive anything of greater importance than the training of Officers and men for the sea. Captain Noel, I think, has been a little hard on some few of us who have opposed as hard as ever we could having masts, yards, and sails in battle-ships; but I think he has misunderstood our reasons for that opposition, and I will endeavour to explain what our reasons are. We hold that we have a Fleet insufficient for our wants, and therefore every ship we have, of every sort and class, ought to be a fighting ship—in other words, it ought to be ready at a moment's notice for active service. We hold that if you put masts and yards into a battle-ship proper, you may put her in a position (by having these masts and yards when suddenly called into action) of losing the action because she has got them, from the mere fact that in these days of accuracy of artillery it might be possible to knock those masts and yards over and foul the screw. On the other hand, I hold as strongly as Captain Noel, and I heartily agree with him, that the first necessities in your ships are seamen, that is to say, men of actual experience at sea, and a man cannot be an efficient Officer or a proper man to man our ships unless he has actual experience, and experience of a very extended character, at sea. I cannot speak about myself at this moment, but I feel very often in the House of Commons (as I sometimes endeavour to utter thoughts through my mouth that I believe are the thoughts of my brother Officers) that it is impossible for me to do so, as I have not been at sea for the last six or seven years; and many Sub-Lieutenants in the Service would give me two stone and a beating with torpedo-boats, as their practice is superior to mine. I entirely agree with Captain Noel as to the necessity of actual experience at sea. I do not wish to criticize him severely, but I do not think he has explained what we ought to do. My own opinion is this, that taking the home fleet, the home fleet ought to be sent to sea working in all sorts of weathers, three or four months in the year actually at sea. I would use the "Admiral" class as the Channel Fleet, but I would take some of their coal out and put a 5-inch steel belt on them to keep out high explosives, and so make them good fighting ships, for at present with their light ends, which can be so easily pierced, they are liable to go over. Then I would have not a half-and-half machine, like the "Minotaur," where men are doing more or less useless work, in my opinion, but have a regular training squadron in the Channel, besides a regular training squadron to go round the world, as it is doing now. I would have two training squadrons, and besides that I would have a cruiser in every station that England possesses. There is a practical way of doing it, but I do not think you get what you want if you mix up the two things. You must begin by sending your men into the cruiser ships and teaching them what is essential in order to obtain readiness of action and resources, without which no seaman is worth a snap of the fingers. The essential thing, as the gallant Admiral has pointed out, is practice with artillery, that one shot may win an action. You must teach your men to be as capable of pitching a shot in the proper place as it is possible to do. I entirely sympathize with the gallant Admiral. For years he has been trying to get a regular sea-going gunnery school, but besides that we must teach our men to be seamen. There is another ques-

tion about teaching the executive branch more about the use of machinery. In the old days, even in my time, I know perfectly well that your executive could tell your artificers how to repair a foretop-sail yard if it was sprung. It is just the same now; your executive ought to be able to say to the Chief Engineer, "Do so and so." It is the Chief Engineer's work, but he must be under the executive, or else you will never win your action. Whether you are right or wrong, the executive should say, "I want that shaft repaired that way." The Captain of the ship and the executive Officer, in my own humble opinion, should know every bit as much about the ship as he did in the old sailing days, and say how a thing is to be done, no matter who is the expert to do it. The lecturer also spoke about the question of signalling. In my opinion it is a most important question to teach Officers and men far more of signalling than they know at present. At a particular moment in an action a clever Admiral may see something that would let him win the action. What does he want to do? He wants to get that something out of his head into his Captain's, but under your present system he cannot do it. I know the Admiralty have tried to improve it, but signalling is bad all over the world. Our present system of signalling not only in itself is bad, but the men that we employ are not sufficient. We must also remember that a whole fleet may be disorganized in a moment because your signalling staff has been destroyed. It therefore seems to me that the question of signalling should be largely added to the education of Officers and men of the Fleet. With regard to trained stokers, the stokers are the men who really win your action. We may say what we like of the man in the engine-room, but that man has to be a great deal more plucky than any of us: he never knows when a torpedo is coming towards the ship; he has to run the ship, and he does not know where he may be the next moment. That man has got to work at those fires in a very hot place, but unless he goes on working, the Captain cannot put the ship in position to enable him to win his action. Therefore I think the training of your stokers and engineer Officers ought to be entirely remodelled and reorganized. We have at present an entirely haphazard system, which would be very detrimental to us if we went to war. I also entirely agree with what the Admiral said as to the question of scamps. I was rather a scamp myself, I am afraid; but depend upon it a great number of men of this kind, as the Admiral has explained, who have been sent out of the Service are the very men you want to fight. Why the Admiralty want to get rid of these men for some offence against discipline I really do not know. Some people are always cantankerous. As a rule, the best boy in the school is the biggest "pickle" he has the pluck to get into, and the scamps are very often the best men you have got. They are altogether different from the scoundrel and the blackguard. A scamp is a good chap, always was, always ready for a fight. But many of these men are debarred by some absurd organization that they did not know of, they are debarred from becoming seamen-gunners. In my opinion your Gunnery Establishment is too exclusive: you should train all the seamen and all the Officers, as far as you can, to gunnery. It is not that we do not want experts in the Gunnery Department, but the Officers and men should have the advantage of becoming gunners, in my humble opinion. I also agree with what the Admiral said about the younger Officers of the day. I believe we never had a personnel better than we have now, both of Officers and men, and I am not going to make myself out an old man, I hope. But as to the younger men in the Service, I think the whole of their wish is that they should be taught in peace what they would have to do in time of war. We must make our men and Officers able to do by ordinary experience what they would have to do in time of war. I think their mind is at one on these questions which I have so often endeavoured to bring before the public; and on which I think my brother Officers agree with me—if I did not think they would agree with me I would not say it—but we want organization. Our want of forethought in many questions connected with the Fleet is perfectly extraordinary; and I do believe, though perhaps some of my seniors won't agree with me, that you will not get that altered until you alter the present system of the Board of Admiralty, so that there shall be a responsible head for each detail, which you can hang up when anything goes wrong. If anything goes wrong at present, all they say is "Oh, it is the Board of Admiralty." I do think, in conclusion, that Captain Noel deserves the thanks of the Service for what he has brought forward, and I

hope sincerely that some definite scheme, if not on the lines I have proposed to this meeting, but something on that class of line, of teaching your men to be scamen first, and to spend some money on these cruising ships, will be carried out. Even if they are sailing ships I do not care, but I think you should teach your men to be scamen first, and then draft them into the great battle-ships and cruisers and torpedo-boats afterwards. I think that would be the best way of meeting the question, which to my mind is second to none in importance, as if we are to exist as a nation we must keep the command of the sea, even though our Fleet should have to be double what it is at present.

Lieutenant MURRAY ATNSLEY, R.N.: As a young Lieutenant in the Service, I propose, with your permission, to say a few words. Captain Noel has given a very good *résumé* of the ideal of a naval Officer, but I agree that the use of masts and yards, his ideal, is unattainable. No doubt there has been a strong feeling lately among the younger branches of the Service against masts and yards, for where the guns and yards have appeared together the guns have always had to give way. The ship has to be made a perfect fighting machine, and it is no good putting up royal yards to play about, and all that sort of thing, if the guns are to be neglected. The ship must be made a fighting ship, and the yards and masts only used as an auxiliary for that purpose. Until that is thoroughly realized, the best thing will be to have the sails screwed on to the yards, so that no one but a blacksmith could play with them. At the present moment the men who ought to be learning how to fire a gun and use a rifle are playing about on the royal yards. As regards the Officers, the present system of training, I think, is very wrong in many ways. Lieut. Chamberlain's young man, I think, has mostly his Captains to blame: I do not think it is possible that a midshipman four years at sea should not learn anything of his profession. I think the cadets from the "Britannia" ought to go in a sea-going training ship for six months; the ship to be of the size of our smaller gunboats, and to be worked entirely by the cadets. This scheme was tried on a larger scale some years since, but the large scale made it a failure. The cadet should be a short time in a large-masted ship, and then for three years in a corvette on a foreign station. After that time his service should be completed in a mastless ironclad. The present examination in seamanship I can only characterize as a farce; you can toss up "Heads I win, tails you lose." If I get one Captain he will give me a first; if I get another Captain he will pluck me. For this a pass examination in seamanship should be substituted. Then on returning to England a Sub-Lieutenant should pass a pass examination without a preparatory course in navigation alone. They should then go through the gunnery, torpedo, and pilotage courses as at present, and then, optionally, a course at Greenwich. The present mathematical course is simply an attempt to put all the round men into square holes. Certain men never will learn mathematics, and you waste a great deal of a young Officer's time by sending him there. I have known one or two Officers who have come away from there, and the only time they wanted to use their mathematics was to find how much flannel was wanted to line a gun cover, and then they had to send out to some one to get him to do it for them. The extra course at Greenwich should last about three months, and the examination should be about the present Beaufort standard. It would be only the really first class men, and of course they would get a certain amount of kudos. Their promotion from Sub-Lieutenant to Lieutenant for examination is, I think, not at all right. You just miss a first class and get a second class instead: that means eighteen months time, which is hardly fair. As regards specialists there, I think there is room for many modifications. You do not want every Gunnery Lieutenant to be up to x and y : what you want him to be able to do is to teach the men under him the use of their weapons. If an Officer wishes to go in for a higher course of mathematics he ought to have further time. At present the course stops short just as you are beginning to learn. The first class people should have a whole year instead of nine months, and then go to Portsmouth. Sir George Willes spoke about the education of seamen gunners, and about men not being allowed to go in for gunnery owing to previous misconduct. I think that is very wrong indeed. There were in my last ship in the Channel Squadron two or three men who were really a credit to the Service in every way, and those men were not allowed to go in for seamen gunners simply because in their young days they

had fair characters awarded them. As regards the training of stokers the difficulty is to get men of sufficiently good physique; the second class stoker on entry is not as good in that respect as he should be. The midshipman's education at sea I think ought to be in the hands of the Lieutenant and not of the Naval Instructor: I think he would give better all-round instruction. Of course in a sea-going ship there is no doubt the working of the ship ought to be the principal point, and all instruction should be subordinated to that. Signalmen I do not think you can possibly train beyond a certain extent. A signalman is born, not made—you can vastly improve them, but not make them. With regard to the results of the training squadron service I must say, from the men I have seen coming out of it, they have not been so good as I could have wished. The cause is that they are too near home, and the cruises are not long enough. The men deteriorate in physique, they are really overworked for young men between eighteen and twenty-one. They also deteriorate in discipline. Too many young men are shipped together without a sufficient leaven of older hands, and the continual return to home ports may also be looked upon as a cause of this. When they come away they do not know very much about their useful drills, they affect to despise the humble seaman gunner, pretending that they are sailors.

Lieutenant LOWRY: Having carefully gone through the quarter bills of the ships in which I have served as First and Gunnery Lieutenant during the last seven and a half years, and taking gunnery instructors, torpedo instructors, captains of guns, and leading torpedo men, as specimens of highly-trained men in both branches, gunnery and torpedo, I find the following results: twenty-six were thoroughly efficient in their fighting and instruction duties, and had received a thorough seaman's training in masted ships. One had served in mastless ships only, and luckily was equally efficient. Three captains of guns were poor seamen, and had very little really seaman's training in sailing ships, but they were good shots and were retained as captains of the guns for that reason. They had the natural gift of being able to lay a gun. There was one torpedo instructor, and three leading torpedo men, good, theoretical men, but who lost their heads and were nearly useless in getting work done when in charge of a party of men. They had served almost entirely in mastless ships, and had been quickly rated on account of their readiness and quickness as instructors, and instructors only. Several of the best practical acting seamen gunners, and one who was acting captain of a gun for a considerable time, were refused at the gunnery ship on account of past conduct, or, in the case of the captain of a gun, because he could not write a good hand, though he was an uncommonly good captain of a gun. Probably the work to be done when a ship is aground is similar in some degree to much that will fall to our lot in a naval war, and tests what men are made of. During the week of varied and incessant work in H.M.S. "Sultan" when on shore, whether it was in rigging purchases, dismounting and transporting guns, getting sails over to stop the leaks, or placing and rigging a steam pump, the men who came to the front and did their work thoroughly well were the men who were active, well trained seamen aloft. It was not always the best seaman gunner, torpedo man, or marine artillery man who showed most readiness of resource. Wholly agreeing, as I do, with Captain Noel in his main contention that men should be thoroughly well trained in masted ships at sea first, there are some minor points in which I differ with him. He says, "It is certainly necessary that a few select Lieutenants, who show great aptitude for scientific pursuits, should have every opportunity and encouragement in becoming experts in their special lines," and I gather from the paragraph that, barring them, he proposes to do away with the gunnery, torpedo, and surveying lines. If so, the Drill Book and fighting instructions of the Services will be largely in the hands of Officers with small experience at sea, the very result that the whole paper so much deprecates. Each branch of the work will, I believe, be infinitely better done by those who make a special study of it than by an Officer who may be watchkeeping in a troopship, Gunnery Lieutenant of an ironclad, in a surveying schooner, or in charge of Whitehead torpedoes alternately. Few men can give the necessary time to keep up thoroughly the knowledge of all the minor details of each branch. We must remember, and no doubt we always do, that the Service is far more complicated now than it ever was before: there is far more to learn, and I do not think, with all due respect to Lord

Charles Beresford, that the ordinary executive Officer in a ship can make himself thoroughly master of every detail in the non-executive branches. I think he will do his work best by knowing sufficiently about steam to see that the Chief Engineer does his duty, and then let him alone to do it. The result of having the Channel Fleet composed of masted and so less efficient ironclads is that in every "war-scare" of recent years these ships would have had to bear the first onset had war broken out. Notably this was the case in February, 1888, when the Channel Fleet of fire of our most ancient ironclads were hurried from Corsica to Genoa and Spezia, and if certain things had happened which people talked about, they might have had to meet, burdened as they were with masts and sails, the French Toulon Fleet.

Admiral WILLES: Throw them overboard.

Lieutenant LOWER: But that cannot be done till war is declared, and it was not done till it might have been too late. The order was given to steam at full speed from Corsica, and during that time war might have been declared, and our masts and sails would not have been overboard; moreover, we should then have to extemporise a very large number of fittings, such as iron-top screens, to make these ships efficient. In conclusion, I would strongly urge that we make our Officers and men thorough sailors first, and then put them ALL through their course of gunnery and torpedo, selecting the best for seamen gunners, not only for instructors but for captains of guns, and for the more important numbers at the gun. We should have at least for heavy guns two men at each gun, who are thoroughly capable of making a good shot, and not only the captain of the gun. I must differ with a previous speaker about the results of the training squadron. I happened to be in a Channel Fleet ship, where we had a large number not only of young seamen but of petty officers, and these men, who had been brought up in the stirring work of a training squadron, were more efficient than the men they replaced who had been brought up in Channel Squadron ships, they rapidly picked up their gunnery and torpedo work. Let the sailing be done in largely increased training squadrons, and let our Channel and Foreign Fleets be thoroughly serviceable fighting ships. On the outbreak of war it might be necessary, and most naval Officers think it would be necessary, if we have an opportunity at any rate of making a dash at the enemy's fleet wherever they were, whether ready or not, at sea or in harbour; and we might then be able to strike a deadly blow at their power, which no amount of training in the personnel and no perfection of material afterwards, would enable us to effect as efficiently later on in the war. I am sure it would be the wish of every naval Officer, young or old, past or present, and whether serving in old or new type of ship, that he might be in it on that occasion.

Captain CHARLES JOHNSTONE: So much of the ground taken up by our lecturer has been gone over already, that it is rather difficult to strike out in a new line. I should first like to speak on the question of masted ships and the Channel Squadron. I cannot help thinking there is rather a mistaken idea in the Service with regard to the advocated use of masts and sails. I think the two things should be kept entirely apart, viz., masts and sails in the Training Squadron, and masts and sails in the Channel Squadron, that is to say, in ironclads. I think everybody will agree that masts and sails in the Channel Squadron are useless, and I believe everybody on board those ships feels that they are not there for use; they look upon them as only a way of making so much work. Sail is made but steam is not stopped; the engines are kept going at the same time, and everybody feels that the sails are a mere farce, they have merely been set to give the people some exercise, and nobody bothers his head about trimming them, because they are not really being used; to brace the yards up might interfere with the routine, and therefore it is not done as it would make no difference to the ship. You set all sails in the "Minotaur," but it does not make any difference one way or the other. I think all this gives a mistaken idea, and I must say I wholly condemn the masts and sails in the Channel Squadron. Not long ago the Admiral in command requested that the studding sails should be removed from ironclads. Studding sails no doubt are useless in an ironclad; the masts and sails are equally useless, and if one thing is removed why not the other? If the masts and sails are kept there for the purpose of gymnastics, or to teach men the use of the sails, why not retain the studding sails as well as the sheet; but I must say I condemn them altogether. In the Training Squadron it is another

thing. We are accustomed to rely upon our sails; we make our passages under sail, and work our ships in and out of harbour; we work our ships sometimes in and out of harbour in circumstances which would have been considered worthy of notice even in the days of sailing ships. Our ships are long, undermasted, and, I won't say unhandy, but certainly slow in their movements, and it requires just as much judgment to handle those ships as it ever did in the days of sailing ships. That being the case, I think the exercise in the Training Squadron under sail is perfectly efficient. I know some distinguished Officers, and I might mention Sir Thomas Symonds, who are entirely against having sailing ships only as training ships, they consider that all ships ought to have steam power, therefore much cannot be said against our Training Squadron on account of its having steam power, but the sails at present are perfectly efficient. If those who object to masts and sails would consider that it is not the same thing having them in a training squadron or the Channel Squadron, it may perhaps clear up the difficulty. There is only one thing in Captain Noel's paper with which I disagree, and that is when he says that the present system of training young Officers is satisfactory. It is so, he says, if they are kept up to work at sea; but that is just what you cannot do; when you have a midshipman in the fore cabin at school he cannot be attending to any other work. A boat midshipman is a boat midshipman by name, but he cannot take the interest in his boat that midshipmen formerly did. Formerly a midshipman was always away in his boat; he was interested in his boat; he was there to see his boat hoisted up, and to see that all was right about her. Now it is quite the contrary: a midshipman does not care whether the boat is clean or dirty, he takes no particular interest in her. I think it is very objectionable, because it kills the first buddings of zeal in the young Officer. On the other hand, a higher standard of education, that is to say, of theoretical education and book-learning, is necessary; a higher standard is now necessary than there was formerly. We cannot go back to the old-fashioned way, where the youngsters in the Service were required to learn the three "R's," and nothing else; we must have a higher system, and to do that we ought to clear the school work away entirely. The youngster should have got through all pure school work, that is to say, pure mathematics and all those things; and he should have got a thorough grounding in that before he goes to sea, and when he goes to sea he should devote himself solely to professional subjects, that is to say, he should then begin the application of the things he had learnt before to his profession as a seaman, that is to say, the trigonometry and the different mathematics he had learnt before should be applied to work out navigation and other problems of that nature. If that were the case we may at once do away with the naval instruction. We have plenty of Lieutenants in the Service who are quite capable of instructing young Officers. It is an entirely different thing to what it was formerly, when Lieutenants, as a rule, were uneducated, and certainly it was difficult to find an Officer who had a knowledge of mathematics. We have plenty of Lieutenants thoroughly well educated, and perfectly capable of taking charge of midshipmen, in fact, I may say much more capable of taking the charge and instruction of midshipmen than average naval instructors. One speaker mentioned that the Lieutenant would also take charge of the other instruction of midshipmen. That I quite agree in; it would be an excellent plan; but there is another important advantage, which is, that in the great outcry against civilians on board ships you would remove the civilians and increase the number of Lieutenants; you would have an additional Lieutenant in the ship; he would be there for the instruction of the midshipmen. You would have an additional fighting Officer, so that you would have positively an additional Lieutenant in the Service without any additional expense. That is a matter very well worth attention. To do that we must enter the midshipmen rather later. There are objections to that; I know that many object very strongly to that, but I hope the objections will be overcome. We know that distinguished Officers have entered the Service late; we know Lord Dundonald entered late, and therefore I think we must not say a youngster cannot learn his work if he enters later; besides, it is to be remembered there are Officers at the present time in the Service who entered at a later age. A distinguished Officer entered at the age of fifteen; the average age is now fourteen. I think there were some Officers who entered at fifteen and a half, and some of those

Officers hold now distinguished positions in the Service. I think that is well worth consideration, especially when we think that we should sweep away the whole of the regular school instructors, and should have the midshipman absolutely free to do his duty without any interference on the part of education. One more point, with regard to masted ships. I think every sea Officer will agree that the only thing to make seamen is to keep the ships at sea. What we want is, that we should be at sea; we ought to spend our time at sea, and ought not to be wasting time in harbour, which is the rule of the Service now rather than the exception. The expense of keeping ships at sea under steam would always militate against that; there would always be an objection because of expense. If a large number of training ships, fully masted, were steam ships as well, you could keep them at sea under sail without expense, and that is a very great argument indeed. I do not think anything could be said too strongly in favour of keeping our ships more at sea than they are at the present time.

Captain LONG, R.N.: After the very eloquent speeches we have heard, I will not detain you one moment, but I should like to tender our thanks to Captain Noel for bringing this subject before us again so ably. There are one or two points on which I should like to remark. I cordially agree with all the speakers who have put before you that the first essential is that our Officers and men should be seamen, that is to say, that they should have their sea legs, and be just as much at home at sea as on shore, and they certainly never will be unless they are kept at sea a great deal more than they are at present. There was a curious instance the other day: a ship went round from Pembroke to Plymouth, and everybody was sea-sick, I believe, from top to bottom, senior Officer to junior stoker. An instance of the same kind occurred to me when I was in command of the "Agamemnon," when we were going down Channel against a strong breeze, the stokers were all so sick that they could not stoke. It therefore seems that if you exercise one-half of the Service without exercising the other half there will be difficulty. There is another point I wish to bring before you. It seems to me a mistake that we allow our young seamen in many cases to be detained in harbour ships. I happen to know several cases where young seamen under twenty-three years of age have been kept three years in a ship like the "Nankin." It has been reported on by the Officers, and everybody deplored it; but surely a system under which such things can occur must be very faulty. It is because we have not enough ships and a large enough training squadron; we ought to have two or three such squadrons, and to make it an essential point to keep our Officers and men at sea. Captain Noel speaks of the manœuvring ships under sail as the nearest approach to what will occur in action. Now I cannot agree to that, because in my career, and specially when I served under my friend, the gallant Admiral, Sir George Willes, I had the pleasure of seeing a good deal of boat tactics under sail and steam, and the part of my experience which I think most valuable from the point of view of carrying a ship into action was that part in which we were doing naval tactics under steam, more especially at high speed.

Captain NOEL: May I ask if that gives education to anybody besides the Officers actually carrying on the ship? When I say "taking a ship into action," I refer to the whole crew.

Captain LONG: Quite so. I was going to say, the manœuvring of a ship could only exercise the man who is doing it, but if the crew and Officers are at their quarters, and are pointing every gun as they would be in action, I think they all gain a great deal of experience which can only be gained in that way. I think we do not do nearly enough of that. It has been advocated by many Officers; I could mention Captain King with regard to torpedoes, and I think most of us who have to do with torpedo-boats find we gain a great deal of experience from having a number of vessels moving about; it was a point we had not previous experience of, because the slow boats that we exercised with whenever possible in the Navy do not give you that experience that you have when you are going 18 knots. There is one point worth considering in that matter, that the experience a man gets in a sailing ship is such a totally different thing from what he gets when steaming at full speed in a modern steamer. The only experience that is valuable is what you are going to have in action; it is no good having other experience; you must

actually point your gun when the ship is going at a high rate of speed, and your stokers are strained to the utmost. I would remark also there is nothing said about training the seamen as stokers, but something of that kind has been advocated. I think the man who is in the stokehold wants as much training as the man on the topsail yard. I would also urge the great importance of tactics. Admiral Baird spoke very strongly last year on the importance of studying tactics. I am afraid it is still the case that we have no regular course of instruction in what might be called strategy and tactics; as part of our curriculum I am afraid it is still wanting.

Admiral P. H. COLOMB: I should like to add something to the last remark of Captain Long. The Government have made some advance towards teaching strategy and tactics at Greenwich, of which they have made me the humble instrument. A course of lectures on Naval Strategy and Tactics has been going on for three years there, and we are in the middle of a course now. A good deal has been said about the discharge of seamen as objectionable. Sir George Willes knows very well how often we have talked over the difficulties of that matter, but it is a matter chiefly in the hands of Captains of ships. If Captains of ships put men in a second class and send them to receiving ships in the second class, there is a difficulty in getting rid of them to sea, because you cannot send more than a certain proportion of them to any ship. These second-class men only grow worse and worse the longer they are kept in harbour, and ultimately, as far as my experience goes, it is from these men that the discharges chiefly come. It was a matter forced on us; it could not be evaded. The remedy is, I think, for Captains to avoid putting men into the second class as far as possible. The lecturer suggested that there were some speakers who did not possess even a latent regard for seamanship. I do not know whether he was at all referring to some of my efforts in that direction, but I think there is not a single naval Officer of the old school, that is, who have served in sailing ships, who could possibly fail to avow the strongest latent regard for the old seamanship. But what I am afraid of is that a great many Officers do not sufficiently suppress that latent regard, that they allow their sentiment to a certain extent to override their judgment. I was strongly struck with that myself coming up Channel as an umpire in the "Rodney" during the manœuvres last year. When steaming at good speed we passed a most lovely ship, I thought one of the most lovely things I had ever seen in my life, one of the great liners to Australia, under sail close hauled on the starboard tack, everything looking just as it ought to look, every sheet close home, not a leach lifting, nothing wanting to please the eye and make one long that it might all come back again to the old life. But there we were standing in the "Rodney" beside the 67-ton gun, and what use was it? One could not help clinging to these regrets, to these beautiful ideas, but we must simply sit upon them and stamp them down. Because, after all that has been said to-day, what it comes to is that our men have to be trained, men and Officers, for that which they will have to do when war breaks out. If you tell me the best preparation for that is the training of the old school with masts and sails, and if you prove it—and I must be allowed to say that I think Lieutenant Lowry has come nearest to proving it of any of the speakers, because he has actually brought the training of sailors into the Gunnery Department, and he has shown as far as the figures go that these men turned out exceedingly good at their guns—if it be proved that the men trained as royal yardmen, and so on, make the very best gunners, and that it is a necessary point of gunnery and fighting training, all I can say is the sooner we set to and train them all in that way the better. But the proof is, I am sorry to say, not sufficient, and we have to recollect what it comes to according to the lecturer's views. He wants all our seamen to be kept for three years of their twelve in sailing ships or masted ships. That means a navy by itself; it means 7,000 men always in masted ships? How much will you lose if you do that? But still, if it is certain the training mast and sail is a necessary beginning for the seaman of the present day, we must have it. Then I think we must go a step further. Although it has been stated that a great authority, Admiral of the Fleet Sir Thomas Symonds, wished that training ships for sail exercises should be steamers, I think if we are going to do the thing we had better do it thoroughly, and not have steamers, but regular good thorough-going sailing vessels, and nothing

else. If you are going to train the men and make them sailors of the old school, surely every instant you are under steam means so much loss to the seamanship. But to me there is a bigger question behind the whole of this, that we must not separate more than we can help the two great Departments—what the lecturer calls the Executive Department and the Engineering Department. There is no question that that vast separation at the present time is the greatest difficulty that now exists, and if we do not mind what we are about it is a growing difficulty which may overmaster us. For my part, although it is utopian to hope for it, perhaps, I think that our business is to use every nerve and every effort that it is possible to do to place the whole management of our ships in the hands of a single class, to get the propulsion of the ship and the fighting of the ship into one set of hands, and not into two. We are a very long way off it now, but I am afraid the more we hark back to the older style of things the more difficult it becomes to draw the two classes together and to amalgamate them into one, and the more remote is the time placed at which that happy result might be arrived at. As to the expense of keeping ships at sea under steam, I do not for one moment believe it. I most fully agree as to the necessity for keeping ships at sea. I think there is a great deal too much harbour, and with our seamen under our present system the point is not so much whether they have served in masted or mastless ships, but whether they have served at sea at all. When I was Captain of the "Duke of Wellington" I made that one of my studies, and was quite appalled to find what a very small amount of actual sea service most of our bluejackets had had. As to remaining at sea, that is the great point. To be away from land, to be away from boats and going ashore, for people to be thrown thoroughly into their ships and kept apart from everything else. When I was in command of the "Thunderer," a mastless ship, in the Mediterranean, I made it a practice to be as much at sea as I could. We used not to steam so much, but our practice was to lie sometimes for a week or ten days simply with fires banked. We used to enjoy it most thoroughly; so much was it enjoyed that it became the practice of the fleet; and several times did the fleet simply bank their fires up and lie at a good distance apart. You then had the opportunity of working up the whole training of your ship free from interruption, making everybody accustomed to her, going on with your training without any irregularity or wish to get ashore, or any pressure of time for the Officer's boat, and so on, but you had all the advantage with but very slight expense as to the expenditure of coal.

Admiral Sir J. C. D. HAX: May I say one word in corroboration of what fell from Admiral Sir George Wiles? The evidence of Captain Shaw was so clear and conclusive, I think, as to the great loss of activity in the seamen of the Navy through want of training aloft, that I think the Report of the Committee before which he gave his evidence would be worth while any of my gallant friends here referring to. I happened to be a member of the Parliamentary Committee before which Captain Shaw was examined, and he stated that he could no longer take men from the Navy for the work of the Fire Brigade, but he was obliged to get them from the merchant ships, because the old recklessness aloft, which was the best of all training for nerve and gallantry, had entirely gone away from the Navy, and was only to be found in the sailing merchant ships. I recognize, of course, that our battle-ships cannot have masts, but by some means or other there should be a considerable proportion of their early lives in which both seamen and Officers should have that excellent training which gives them the best possible nerve that men can have.

Captain NOEL, in reply: I am much gratified with the support I have received to-day. I think in the case of almost every speaker, except Admiral Colomb, I have had more or less support. I only wish a few more of the *seamen* I see before me, who are looked upon in the Service as amongst the most reliable of our Officers, had risen to make a few remarks in favour of what we must consider the backbone of our professional knowledge, that is "seamanship." Seamanship I know is looked upon by the younger Officers in a somewhat different light to what it was in former years. I hold that seamanship is not necessarily the working of sails, but it is that knowledge of a sea-going life which can only be gained by constant sea-work, and what I contend in my paper is that we cannot get that constant sea-work without

putting our Officers and men into masted ships. I think Admiral Colomb has rather proved this for me. What he told us is that he used to take the "Thunderer" to sea, let her lie like a log on the water, sometimes for a week together. I would ask what seamanship experience was gained by any man or Officer on board by such a process? Why, even the experience of boating that he learns in harbour is denied him; he can, perhaps, do his gun-drill, his torpedo-drill, but what seamanship can he learn? The lead cannot be hove to take soundings, and a man is not even required to steer, and yet this is what is represented as seamanship training in lieu of the sailing of ships at sea. I am very glad that we have had views expressed by some of the younger Officers. I think Lieutenant Murray-Aynsley gave us a very nice little speech stating what *they* think of the matter, but I do not gather from what he said that he opposes seamanship. I dare say he would curtail the seaman's training rather more than is recommended in my paper. Lieutenant Lowry most thoroughly supports the view of training men as seamen, and I have had support also, I am happy to say, from higher authorities. Where my paper has been opposed more than in any other question is in the matter of making the Channel Squadron the squadron that will carry on the seamanship training. I was in the Channel Squadron some years ago when Admiral Sir Geoffrey P. Hornby commanded it. In those days we used to be under sail alone constantly; we would disconnect the screws, and the squadron remained under sail for three or four days at a time. I do not know why the same thing cannot happen now: surely the same ships are not more dangerous than they used to be. I purposely omitted, in the vessels I mentioned, some of those that cannot sail, the twin-screw vessels, for instance; but the "Minotaur," "Hercules," and "Triumph" classes are all fair sailers. I do not say that they should be taken in and out of port under sail, but still when they are at sea there is no reason why they should not be kept week after week under sail, and I believe some of them would do as well as some of the old line-of-battle ships. It is generally admitted that we ought to train our Officers and men to a sea life, and we are told we can do it in the new ships, but imagine a squadron of "Merseys," or some such new fast vessels, they carry very few seamen, and the only order the Officer of the watch has ever to give is "Boatswain's mate, pipe a hand from each part of the ship, up ashes." There is no ordering men about: there is no taxing the brains to know whether you are carrying on correctly in shifting your topsail, or some other evolution which is such admirable practice for both Officer and man, and in place of which (in mastless ships) I do not know what can be done. There is, in my opinion, plenty of time to train our Officers and men in the effective working of the new battle-ships. I do not despair of this at all if they are first made seamen, and they would qualify after a seamanship training in a third of the time that would be necessary if brought up in any other way. I am grateful to Lord Charles Beresford for his support: he has an independent voice with which at will he can gain the ear of the public, a power that always carries great weight. I only hope that he will thoroughly support the training squadron, and get it doubled, if he can. Of course I do not want masts and sails in battle-ships, but still if our Channel Squadron was used as it has been up to the present with masts and sails—and there I do not quite agree with Captain Johnstone, for I think they might be worked more under sail as they used to be—I contend that they should and could carry on the training of the younger Officers and seamen: they might be periodically brought home and turned over to the newer ships for some cruising in the summer; we should then get a very fair amount of training in masted ships. I beg to express my most sincere thanks to Sir Henry Keppel for kindly taking the chair. It is a circumstance on which I may most truly congratulate myself that the gallant Admiral, who for so many years has been looked up to and esteemed as one of our most splendid seamen, should have come amongst us in his old age and show that he can still say a word for the old Service. I have no doubt presently he will do so. I thank you very much for the patience with which you have listened to me, and I trust that this paper and the discussion on it—which has been so well sustained—will bear fruits to the benefit of our Service.

The CHAIRMAN (Sir H. Keppel): I do not know, ladies and gentlemen, that I am called upon to add anything on this occasion. I have long been on the Retired List, but I have been very much interested in all that has been said on both sides.

I am only an old salt, and have a very strong feeling that the naval education, the sea-going education, was always necessary for our Service. It is that that gives the sinew and strength to our men. I doubt whether the splendid men that now form the Navy would be the fine fellows they are had they not gone through a sea training. Above all they get that exercise of mind so necessary for every seaman that goes aloft. His life is in his hands. It is not like the sergeant of marines who drills men. The man goes aloft with his life in his hands, and he has to think before everything he does, and I maintain that is the training that the men want. The old school has passed away! I have now only to thank you for your kind attendance, and to say how much interested, one and all, we must have been in the speeches that have been made to-day, and in the lecture to which we have listened.