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### Discussion on the Naval Prize Essays, 1896

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## DISCUSSION ON THE NAVAL PRIZE ESSAYS, 1896.

### SUBJECT OF ESSAYS :

“In View of the Changes which have taken place in the  
“Composition of Fleets during the Present Century, what  
“System of Entry, Training, and Distribution is best cal-  
“culated to ensure an Efficient Body of Officers and Men  
“of all Branches, for a Peace and War Establishment?”

### ESSAYS FOR DISCUSSION :

*First Prize Essay by Commander J. HONNER, R.N.*  
(April Number of Journal.)

*Second Prize Essay by Captain S. EARDLEY-WILMOT, R.N.*  
(April Number of Journal.)

*Essay (honourably mentioned) by Captain J. M. ROSE, R.M.A.*  
(May Number of Journal.)

Friday, May 1st, 1896.

The Right Hon. The EARL OF HOPETOUN, G.C.M.G.,  
in the Chair.

Admiral Sir GEORGE ELLIOT, K.C.B.: The object of this meeting is to discuss certain proposals for manning the fleet, as defined in the Prize Essays published in the JOURNAL of this Institution. There can only be one opinion as to the great merit of these essays from the point of view of instructive information, for in that respect nothing is wanting for our guidance, and it is only left to us to express an opinion on the conclusions arrived at according to our lights. I find it quite impossible to deal with all the questions treated of in the essays; and I, therefore, confine myself to one only—the efficiency of the Royal Naval Reserve and “a further Reserve for the Navy.” In fact, even on that one question I find that these essays are so voluminous, that it is very difficult to condense one's opinion within a small compass. I noticed with regret that Commander Honner prefaced his scheme by limiting himself to proposals which, he says, would have the least chance of becoming of practical effect, thus yielding to the verdict of political economy. Of course, it is a question of money, but that is not a matter for Naval experts, unless the country was in a bankrupt state, instead of in a state of plethora of wealth and paying off debt. We have, therefore, not got Commander Honner's very best ideas; we have not got a scheme before us founded on real efficiency, but one based on limited expenditure—a policy which I think Naval exponents should be very loth to encourage. What I also notice is that his plan does not provide for the growing strength of our fleet, for it has no elasticity, inasmuch as the one-third of the *personnel* of our peace requirements would only afford a limited fixed number of short-service men, and any large increase of that number would, as the writer says, be repugnant to Naval officers, and, in his own opinion, rightly so. Besides, we should have to wait for years for the first batch of these Reserves, and much may happen during that time. Another point is that these short-service men in joining the Reserve would not, if they entered the mercantile marine, be all of them at home on the outbreak of war, nor

would their discipline be improved by their association with that Service; in fact, they could not be relied upon. If the principle of short service should be entertained at all as a means of creating a Reserve, it should be supplementary to, and not apart from, the present peace establishments, so as to avoid their deterioration; therefore a better system would be to embark a portion of our Reserves on board each ship for short service, in addition to their complements. The whole question, in fact, is a matter of money; unless we are prepared to pay the price for training, we cannot have an efficient Reserve. I may say at once that I see grave objections to short service of any kind, and that under any system of Reserves some re-adjustment of the crews of ships in commission, will be unavoidable in the event of war. The right policy to be pursued, in my opinion, is to endeavour to the utmost to perfect our Reserves by careful selection and adequate training of a class of men of nautical proclivities who could be mobilised with certainty in a few hours when wanted, and in such numbers as to man the fleets and then to leave a sufficient residue to fill up losses. No other scheme is commensurate with national security. The state of our mercantile marine is not only a disgrace, but a danger to this country, and we must all agree with what Captain Eardley-Wilmot says on that behalf; but the reforms he suggests would take time to develop, and as a political measure would be more contentious even than that of increased estimates. The question of our reliance on the mercantile marine for manning the Navy requires to be considered from a totally different point of view to that which has hitherto been maintained. To my mind, steam motive power has added greatly to the capacity for self-defence of the greater number of our traders, and every encouragement should be given and facilities afforded in that direction, for with a couple of Q.F. guns and a few trained men to fight them a small number of these steamers sailing in concert even without convoy would render it a matter of self-interest with privateers to avoid an encounter, and even an enemy's cruisers might feel it questionable whether such captures were worth the sacrifice of a few lives. We are taking 10,000 men of the pick of that marine to man our fleet, and we subsidise some of the fastest of their steamers as "vidette," ships for our fleet to the detriment of the commercial vocation of that service and of our food supply. Is that wise? I think not. I would go on the other tack, and subsidise the best of our steamers in the direction of self-protection, if armed and manned by British seamen only. The subject would require an article of its own, and I only refer to it as bearing on the question of our Reserves. The old East India Company has taught us a useful lesson in that respect, and so are the Russians doing now, and I believe that the knowledge that our merchant service was thus prepared would damp the ardour of privateering, and to some extent the cupidity of foreign nations. I entirely concur with Captain Wilmot's commendation of our second-class Reservists and with all the changes he proposes in order to improve their condition and increase their numbers, their deficiency in these respects having been entirely owing to stinted expenditure, which, in fact, is the only real difficulty which stands in the way of efficiently manning the fleet. What I notice as most remarkable in these essays is the entire absence of recognition of the available means of supplementing our other Reserves by developing the Volunteer movement for Naval purposes. I feel confident that if encouragement were held out, many corps of Naval Volunteer officers and men might be enrolled within a twelvemonth, fulfilling whatever conditions the Admiralty think necessary to impose, and proving as efficient for Naval purposes as the Army Volunteers are for that service. The permanent staff of these corps would be retired Naval officers, the junior officers selected for their nautical proclivities, and forced to pass an examination in order to obtain their commissions as sub-lieutenants or lieutenants. They would not reach the higher rank. The men could be of the same class as those now enrolled as our second-class Reservists, with a sprinkling of mechanics from our ship-building firms, a most valuable addition in these days when war-ships are masses of

complicated machinery. Instead of one month's gunnery instruction, these men, like our Army Volunteers, would have constant training on shore and on ship board if vessels were provided. That, perhaps, is the main question of all. It was the cause of the breaking up of the Volunteers eight years ago, because the Admiralty would not supply them with vessels in which to train. If half-a-dozen of our small corvettes were employed for that service, I believe these Volunteers would very soon prove themselves efficient; they would have the same *esprit de corps* as the Army Volunteers, and better auspices as regards discipline under the influence of their officers than our second-class Reservists, who have no officers in constant touch with them. Their training would be more continuous, and more general. The expense of this corps would naturally be greater than that of our Army Volunteers on account of the sea-going training they might require, but which must be afforded to all classes of Naval Reservists in vessels appropriate to that purpose if they are to be efficient. The qualification of the rank and file of these Naval Volunteers in point of physique, and standing, and intelligence, would I believe bear comparison with any other mode of enlistment, and their number could readily and rapidly be increased as the service would be popular, for those who were so recklessly disbanded five years ago consented to accept service with the fleet in war-time, without reservation of time or space, which disposed of the objection raised that they would not serve abroad. It may be said that the officers would not be efficient; but the staff of senior officers would be fixtures, and there are numbers of young men of means and education in our sea-port towns with nautical aspirations who would qualify, if not as watchkeepers, yet for the other duties on men-of-war, and at any rate beggars must not be too exclusive. I contend that as lieutenants, or sub-lieutenants, these Volunteer officers would in many respects prove a greater acquisition than the ordinary run of those in the mercantile marine, and the late proposal to employ Marine officers to perform some of the duties of lieutenants justifies the belief that there is plenty of material out of which to form Volunteer officers equally competent under the same system of training. If other nations are now placed more on an equality with Great Britain owing to the reduced value of seamanship as an element of Naval superiority, yet the British race has not lost its cunning, and those other qualities which have hitherto contributed to the success of our arms by land and sea; and these Volunteers would stand to their guns and know how to fight them as stoutly as they did in days of yore, and it must be borne in mind that each gun now is a battery in itself, requiring an officer in command. I believe the Naval Service would be as popular with Volunteers as the Army, and the state of our Reservists condemns such a policy as that of stifling the patriotic feelings and nautical aspirations of our countrymen, and thus setting a bad example at home and to our colonies by disparaging Naval Volunteering as an element of Imperial defence. I am dead against short service, and against making the Royal Navy a nursery for the mercantile marine. Unquestionably, that service requires to be reconstituted in the sense of being naturalised, and thus restored to its proper vocation as an arm of Imperial defence, instead of as at present a nursery for foreign Navies. Its present condition may be called politic, but to my mind it is reckless impudence, and at any rate Naval officers should never lend themselves to the proposal of any sacrifice of what constitutes the highest efficiency of the Royal Naval Service. They should stand shoulder to shoulder in defence of their interests as combatants who risk their lives in defence of their country, and expose all negligence as a crime. We are told that Naval officers are irresponsible and know-nothings, because they cannot make black appear white, or perceive how three may make four. Irresponsible forsooth, when their lives are at stake, and because they see no fun in allowing themselves to be handicapped to their own destruction without protest, and in order to bolster

up popular budgets. The truth is, they are very much responsible to themselves if they conceal glaring facts to their own injury, and also to their countrymen for withholding from them any danger they foresee. Their responsibility is a lasting one, whereas the responsibility of a Government dies with them. On the vital question of the adequate strength of our Navy are Naval officers to remain silent, when they hear it said in high places that our Naval supremacy is so assured that the Navy Estimates can be reduced next year, and when they know that reckoning the so-called coast-defence ships of foreign nations, which are battle-ships in disguise, we are ten battle-ships short of a bare equality, of that fighting power which in the event of war we should have to contend against? These remarks most deeply concern the plans presented to us for manning the fleet, seeing that the short-service system falls far short of future demands, and is therefore incompatible with our needs. It would almost look as if there were grounds for believing that the growth of foreign Armies had reached its climax, whereas to all appearance the rivalry for sea-power is likely to continue until the crisis comes which will decide the fate of our Empire; and where, it may be asked, can the responsibility then be attached, should we be found wanting? I am quite aware that I have touched upon some very delicate subjects, but nevertheless, they are very important in their bearing on manning the Navy. I may be accused of causing discontent, but I consider that that is an ingenious plea which should be dismissed as irrelevant, for the origin of discontent is a sense of concealment. I deprecate appeals to public opinion for personal grievances, and think that all claims of that nature for redress should be passed through the appointed channels. But the defensive power of our Navy is a matter which concerns every citizen, without regard to grade or occupation. What has led to the formation of the Naval League is, that professional opinion is no longer represented in Parliament as in good times of yore, but is now concealed by politicians for political ends. If the organ of publicity of that association is untruthful, let the Government expose its untruth; but if that is not done, then silence gives consent, and the public is not left in ignorance as to the true state of the Navy, which, according to the evidence afforded by that journal, is still dangerously deficient, both as regards ships and men, in what constitutes that sea-power said to be essential to the safety of our Empire. When everything points to the necessity for largely increased expenditure as the only means of restoring our Naval supremacy, is it surprising that Naval officers should bestir themselves on national grounds when they hear reduced estimates complacently talked of for next year? I am extremely grateful for the patient hearing you have accorded me.

Major C. G. BRITAN, R.M.L.I: I am afraid I can only speak on a small matter in this question of national importance, viz., my own Corps, as referred to in the first and second prize essays. We have already discussed these essays at Plymouth, and I will endeavour to put before you the opinions which I heard expressed on the points raised in them, in connection with the training and efficiency of the R.M. Corps. Both the first and second prize essays state that officers R.M. are given little authority or responsibility on board ship. The suggestion is made that they do not receive any authority or responsibility, because they are not much used for naval work. When the officers go on board ship they come under a fresh system entirely. Up to that time they have been accustomed to deal with their own men, to deal with one another, and to deal with the materials placed in their hands; but on embarking they find themselves not authorised by right to do anything, they cannot deal with their own men for any of the offences they may commit, they cannot sit as members of courts-martial on their own men, and when they are landed with a naval brigade they are not eligible by right to take command, should their seniority, according to relative rank, place them in the position of Senior Officer. It is suggested that the officers should know what they are going to do on board ship; that it should all

be clear and defined between themselves and their superiors and between themselves and their subordinates. It is thought that the system which would give most efficiency would be one in which they should deal with their own men by right (with a proviso to meet the case of an incompetent officer); that they should be eligible to sit on courts-martial on their own men; and that, when they are serving in combined operations on shore with a Naval brigade, and they happen, by casualties or otherwise, to be the senior in relative rank, they should be able by right to take their position as such. The effect which the consciousness of *responsibility* has on the training of the individual is very clearly pointed out in the following extracts from "The Tactics of the Future," by Lieut.-Colonel W. A. H. Hare, R.E., which appeared in the May number of this JOURNAL:—"Responsibility. —The latter makes a man reflect, offers him an inducement to work, raises his professional tone and sense of duty, gives him an object to strive for and obtain, and turns him, in fact, into a man of action, provided he is of intrinsic value, integrity, and fidelity. On the other hand, we generally see men of weak character shrink from responsibility of any kind; instead, indeed, of arousing in them any signs of determination, it seems to have rather the opposite effect." . . . . . "The feeling of *duty* and consciousness of responsibility are again chiefly together the means of arousing our intellectual faculties, and really honest work only begins with a sense of responsibility. Responsibility makes us reflect. Sound reasoning, however, is perhaps the greatest task that can be imposed on human nature, especially if it is to be of a lasting kind. It is devoid of enervating effects; it is invigorating. It appeals to the brain which governs the nervous system, and triumphs even in cases when it has to deal with physical weakness. Responsibility again leads to that inward reproach of shame which is such a powerful lever in overcoming the hesitating moments of the weak." . . . . In two places it has been suggested that the young officers should start their career by learning nautical work, I mean by that, navigation and the allied subjects; and it is also suggested that they should be taken away when they are about 19, and sent to sea for a year before they have completed their discipline on shore. It is felt that the result of that education would only be that the country would get a third-rate "Seaman" officer or a very undisciplined "Marine" officer. The system recommended is that the recruit officers should go straight away to sea for two years after completing their drills at headquarters; that the officers generally should be eligible to go in for the same classes of instruction as the Seaman officer in all the weapons that are to be found in the fleet, and that they should be able to take out the same certificates and receive the same qualification that a Seaman officer can at the present moment. The question of the amalgamation of the two branches of the Royal Marines—the Royal Marine Artillery and the Royal Marine Light Infantry—is referred to. This is considered very desirable, and it is hoped that any system which may exist in the future will amalgamate the two branches of the Corps, and will cause the Light Infantry to be trained on the same lines as the Royal Marine Artillery, both officers and men. The Gold Medallist speaks of the increased complements in harbour ships. I take it he means by that the largely increased numbers in the Naval depôts of our three big ports, and he points out the loss of sea experience. That is no doubt true. He does not mention another point—that, through a large number of men being employed in the home ports in the Fleet and Dockyard Reserves there is a great loss of training to the Corps generally. The Corps cannot keep up the supply of trained men for the fleet. Of course there is an easy remedy for that, viz., to increase the strength of the Corps, which is being done gradually. But at the present moment that is the great difficulty. It is very much desired that the Royal Marines should be drawn more closely to the Navy in every way, and it is considered that any system for drawing them closer must, to start with, give their officers a defined position on board ship. It certainly would seem advisable that a large Corps, like the Royal Marines, nearly 16,000 men strong, should have a

direct representative on the Board of Admiralty, an officer who has passed through the ranks of the Corps, and would understand its sentiments and its traditions. It should be practicable for officers to obtain the same qualifications in all the weapons that are found in the fleet as the Seaman officer can. Under such a system of training there can be no doubt that the grand old disciplinary spirit of the Corps would thrive, and its efficiency would be greatly increased.

CHARLES M. JOHNSON, R.N. (Chief Inspector of Machinery), Retired : Not being a member of this Institution, I consider it an honour to be permitted, as an outsider, to give some of my views with regard to these very interesting essays. I will take them in the order in which they stand, the order of merit. Beginning with that of Commander Honner, I would say, first of all, that I shall confine my remarks entirely to the subjects which interest or affect my own branch of the Navy. I agree generally with the remarks of the essayist in the first paragraph, under the heading of "Engine-Room Artificers," more especially in the estimate which he has formed of the importance and general abilities of these valuable chief petty officers, and I most cordially endorse his words when he says : "The men who assist to drive the Atlantic liners have a light task compared to the work which falls to the Naval E.R. artificers. On these grounds it is essential that the numbers of this rating required for the fleet should be kept up to the full amount." As to whether the Admiralty estimate of what should be the full amount is adequate to the real interests of the country or not, I shall speak later on. I pass on now to the second paragraph under this heading, where I am obliged distinctly to dissent from the author. He is altogether in error when supposing that the men of the mercantile marine known as "greasers" could in any way be considered as fit and proper material of which to form a Reserve of E.R. artificers. What is a "greaser" ? He is a man who is not a mechanic, but simply an engine tender. From prolonged experience of one particular class of work, he has acquired considerable efficiency, it may be, in running the machinery of the great Atlantic liners without heated bearings : that is all ! He has nothing to do with the manipulation of the engines, except under the immediate orders of the engineer. He is never a responsible watch-keeper. His duties are analogous to those of our leading stokers ; and, as a Reserve of that class of petty officers, the "greasers" of the merchant service would be a valuable addition. The duties of the E.R. artificers are not confined solely to the manipulation of the engines, nor to watch-keeping : these, in fact, are the duties which, as a rule, occupy the smaller portion of their life afloat ; the greater part of their time is employed in "mending their nets after fishing"—*i.e.*, in making good defects, adjusting bearings, and generally overhauling and examining the machinery. For it must be remembered that even now, with all the pressure which the Admiralty put upon admirals and captains to keep at sea, more time is spent in harbour than at sea ; and, at such times, when work requiring high mechanical skill and ability is in hand, of what use would the "greaser" be ? Could or would the chief engineer set him to adjust a connecting rod, or re-braze a steam pipe, or pitch a boiler, or line up a link motion ? Not if he had any regard for his machinery. In making this proposal for the employment of "greasers" as E.R. artificers it is evident that the author is dealing with a subject with which he is imperfectly acquainted. It is probably news to him that many E.R. artificers hold Board of Trade certificates as engineers ; and that many more could obtain them if they chose to submit themselves for examination. No ! the equivalent of the Naval E.R. artificers in the mercantile marine is not the "greaser." I pass now to the second clause of this part of the essay, "*b.* Stokers," and I will briefly remark, that while I concur in the belief that men of the R.N.R. would make tolerably good stokers for the Navy—although it must not be lost sight of how different are the conditions under which steam, at anything like "full power," is maintained in the Navy, as compared with merchant ships and liners—it is by no means certain that any large number



of these men would be available in the event of war. Is it so certain, as some would have us believe, that, on the outbreak of war, all or most of our merchant steamers would be laid up in port? If such were the case, how about our food supply? and why is provision made for armed cruisers to protect our merchant shipping? We must at all costs keep open our communications with those neutral ports from whence our food stuffs may be procured; otherwise this country would be starved into submission in a very short time. That there would be many small steamers laid up at such a time may be possible; but their crews will be required to fill up losses in the larger ships, caused by the discharge of foreigners and others. I do not think we should count on any assistance from the merchant service in time of war, as far as regards engineers or stokers. Time will not permit me to follow the author through his ingenious tables, showing how the R.N.R. is to be built up. I have already said that we cannot count upon any large amount of help coming from the merchant service, and therefore it is superfluous to run a tilt at a man of straw. Tables of this kind show a vast amount of ingenuity, but are rarely of any practical value. It is so easy to make men on paper, but very different to obtain them in flesh and blood. I pass on now to where the author deals with the Engineer officers. He does not tell us from what source his table of the estimated numbers required is obtained; and time has not permitted me to go through the list of ships in the Navy and those building to ascertain its adequacy or otherwise. I presume, however, that it has been drawn up by taking the list of ships and Mobilisation Form No. 1, and putting the two together, the estimate has been arrived at. As I propose to deal, later on, with the question of adequacy of E.R. complements, as provided for in Mobilisation Form No. 1, I will here only remark that I totally dissent from the author's suggestion that, to supply part of the deficiency of 237 Engineer officers, the third-year students should be reckoned upon. The "Exigencies of the Service"—that fatal, facile phrase, used to cover a multitude of administrative sins—have already caused the absorption into the Navy of some dozens of embryo and immature engineers of the fourth-year students. This error should not be repeated. Still less should the lower step be contemplated of descending to the third-year men! On the contrary, the original period of six years' training should be resumed immediately, and adhered to in the future. It is unreasonable to expect these young fellows to master their profession in a shorter time than six years. If they learned only to be expert workmen, it would take at least five years for them to acquire the requisite facility of manipulation with the tools; but when to this has to be added a curriculum of technical education, which is of equal importance, is it too much to insist that adequate time shall be given for both purposes? But three years! What can the engineer student know of his profession in that time? The author evidently has no great faith in his own proposition, as he says that "at a pinch they might assist in performing duties falling to assistant engineers." Assistant to an assistant engineer! Away with it! Are we going to play at engineering—the nation's first line of defence? I am glad to be able to find another small point of agreement with the author. He says: "To get competent men from the trade (*i.e.*, the outside firms) a much higher remuneration than that now offered will have to be given. It is not in the interests of the country or the service that they should be brought into competition with the market rate of pay . . . . Considering the very important duties that fall to Naval Engineer officers, there can be no question that the true policy for the country to follow, and the cheapest in the end, is to train her own Engineer officers, and not to look outside for any help." That is undoubtedly the policy which the Admiralty should adopt; but seeing that, according to the author's own showing, the present deficiency amounts to 237 officers, and recognising the long period which must elapse before the present source can be brought up even to present—not to speak of future—needs, it behoves the Admiralty to grapple immediately with the question, and to solve it without reference to any other con-

sideration than that of the country's needs. Keyham College cannot supply us for years to come with the number of Engineer officers we require; therefore, the outside profession must supply our needs for the time being. Before offering any suggestions in place of the proposals I have taken objection to in the First Prize Essay, I should like, briefly, to consider one or two points in the Second and Third Essays; and I thoroughly agree with Captain Wilmot's suggestion, that "it would bring this branch [*i.e.*, the engineering] more in harmony with the others if it were recruited much in the same way, and entered the Service through the same channel [*i.e.*, as the executive officers]." But, I would alter or amend that proposal by suggesting that they should all be entered on exactly the same footing, and without any decision as to which branch of the Navy the successful candidates were to join; leaving the selection entirely to subsequent examinations, and the observation and reports of their instructors, who should have little or no difficulty in deciding for which branch of the Service a cadet is best suited. In the American Navy, cadets of both lines—Naval and Engineering—enter West Point together; but I am not able to say whether they enter with the distinctive titles, or whether that point is settled subsequently in the manner I have suggested. But that question is of less importance than the primary one of a common training college, on entry, with which I heartily agree. Referring to the training of the engine-room staff, there are many remarks of Captain Wilmot's which I endorse. I will only refer, therefore, to one or two in which we are not altogether in agreement. In speaking of the training necessary for the second-class stoker, he says: "For the duties of fireman, or stoker, we now enter young men direct, but they should go through a regular course of training before being drafted to sea-going ships. This should include stoking in torpedo-boats and destroyers, as well as larger vessels." Training for second-class stokers is a necessity which the Admiralty has not yet recognised. No provision is made for regular training. Men are entered from the plough-tail and the farm-yard; from our cities and our fishing grounds; from the labourer's hod and the cab-stand, and pitchforked into the stokeholes of our men-of-war without any training whatever in engine-room or stokehole work.<sup>1</sup> It seems to be thought that firing a boiler is a thing which comes naturally to every son of Adam who finds himself in front of a furnace with a shovel in his hand. It is a fallacy! My experience is, that a man may be twenty years in a stokehole and yet be unable to fire scientifically, or even efficiently. All Naval engineers will tell you of the failures they have met with. But while all stokers do not become proficient in the course of years of actual practice, it would be absurd to jump to the opposite conclusion, that training cannot help the raw recruit. It will be seen that thus far I am in agreement with the writer, but I take exception to the latter sentence of the paragraph, *viz.*, that this training should include torpedo-boats and destroyers. One doesn't expect a child to run before it can walk; and training in torpedo-boats and destroyers may well be postponed until the second-class stoker has been rated first-class and has done a commission at sea. Again, Captain Wilmot says: "Owing to improvements made in the pay and prospects of this branch, the class of stokers entered has improved, and no difficulty is found in getting the numbers required." That is not my experience, at any rate, and I have only just quitted one of our principal ports where the entry of stokers is carried on. Not only do candidates not present themselves in sufficient numbers, but more than half of those now entered would have been rejected had former standards been adhered to. The present standard of height is 5 feet 4 inches, and chest measurement 31 inches.<sup>2</sup> A few years ago these were respectively 5 feet 5 inches, and 34½ inches. Now, considering that the work of a stoker is the most exhausting which falls to the lot of a man-of-war's man, does it not appear somewhat extraordinary,

<sup>1</sup> On the official recruiting posters it is stated in large type: "No previous experience necessary."

<sup>2</sup> Up to February last the standard of height was 5 feet 3 inches.

not to say ludicrous, that the standards of physique for these men should be so low? Very few of those who are now listening to me can have any conception of what is involved in hauling out the fire from a furnace  $6\frac{1}{2}$  feet to  $7\frac{1}{2}$  feet from mouth to bridge, and from 3 feet to  $3\frac{1}{2}$  feet across the bars! If the fire has been properly burned down before drawing, there will still be from 8 to 10 cubic feet of glowing clinker and ashes to be hauled out; and this, be it remembered, up an inclined plane to the furnace mouth, which may be 3 feet 6 inches from the stoke-hole plates. The physical power required to be exerted to do this work must be seen to be appreciated. Can we expect young fellows of 5 feet 3 inches in height to be able to do such giant's work? We do not want tall men, but the minimum standard should be 5 feet 5 inches. It is undoubtedly true that some of these weedy youths develop marvellously during the three months' disciplinary training which they undergo at the dépôts—due generally to the excellent food, the moderate exercise, the fresh air, and the temperate life they are obliged to lead; but why the training should begin and end with their dépôt work, and why they should be drafted to sea-going ships as part complement, without any training in that which is to be their life's work, is, I confess a matter which I have never been able to understand. Compare the years of training which the blue-jackets go through. And of what use is all this magnificent training and drill on deck if, when all your guns are disabled, and your last torpedo is fired, you cannot run away, because your stokers do not know how to keep steam? Of what use is it to build ships capable of beating all other ships in the world in speed, if at the critical moment when you want the final effort exerted your engine-room complement fails you, because you have not trained them? Surely, it is but the wisest economy that, when spending your millions on your ships and engines, you should spend your tens of thousands in training that staff on which you must ultimately depend for giving you the weather-gauge of your enemy! With regard to the E.R. artificers; Captain Wilnot finds fault with the fact that these men enter the Service as chief petty officers, and he advocates their entry on a lower grade. It is sufficiently difficult even now to get thoroughly qualified candidates; and I have no hesitation in saying that any proposal to diminish their rank on entry would be the most effectual barrier the Admiralty could raise before intending candidates. Warrant rank for E.R. artificers is a concession which must be granted in the near future. It will then enable us to retain the services of highly skilled and experienced men whom we now lose in the very prime of life. The difficulty as to cabin accommodation referred to need not be considered. There are many Engineer officers ranking with lieutenants who have no cabins. The E.R. artificers would, no doubt, agitate for cabins as soon as Warrant rank is conceded; and, as far as it is possible, cabins should be given them; but there is a limit in all ships to the space available for cabin accommodation, and that must regulate the supply. It would be a mistake to give these men commissions, even if many of them were found to be men who, "in the manipulation of the engines, were equal to all the duties of chief engineer"; for the fact is that the principal duties of the chief engineer do not consist in the manipulation of his engines, however smart and expert he may be. The chief engineer seldom touches the engines in the way of manipulation, except it may be on first commissioning, when it is possible he may find himself surrounded with a staff, few, if any, of whom have seen the machinery under weigh—still less who have actually handled it. I extremely regret that the Third Essay has been so short a time in my hands. It is one deserving of the most careful consideration, quite beyond the possibility of crowding into a few hours with that of the other two Prize Essays. I can only glance at one or two points. The author, speaking of the best way of making the Service more attractive in the E.R. Department, so as to ensure a sufficiency of stokers offering themselves, says: "The best way to achieve this is by making the work less arduous; but until the numbers are increased this

economical solution cannot be obtained, therefore such suggested improvements in pay and positions as the chance of Warrant rank and the additional 2d. a day on re-engaging must be tried to enable the work to be made lighter and more interesting." It is undoubtedly the fact that the reduction of E.R. complements which took place in 1892 resulted, and still results, in more hours of labour being enforced on the members of the E.R. staff than on those of any other branch of the Service. This and the withholding of the extra 2d. a day which was some years ago conceded to all other branches of the Naval Service (I am not sure whether the Marines get it) on re-engaging, are two of the principal grievances of the stoker element. The first will take some time to remedy; the latter may be done immediately. And that very small and just concession would act as a charm in two ways: first, by inducing men who now claim their discharge at the end of their first term of ten or twelve years to re-engage for the second period, and, second, by affording an additional inducement to men to join. Turning to the Engineer officers and the author's remarks on their entry and training, it is especially gratifying to me to find an officer in the Service outside my own corps, not merely willing to concede, but actually advocating, executive rank for the Engineer officers. Having been the father of that proposal nearly thirty years ago, I most heartily endorse it here. The proposal to endeavour to induce firemen and engineers R.N.R. to serve for short periods in men-of-war is a good one, well worthy of adoption, until by increasing the number on the actual strength of the Navy the E.R. Department shall be equivalent to its requirements. Having thus most superficially and cursorily criticised these three extremely interesting essays, as far as they deal with the E.R. staff, I will endeavour as briefly and concisely as possible to point out what, in my estimation, are the most urgent reforms necessary to ensure efficient service in the E.R. Department of the Navy. These are three in number, viz., 1. Training; 2. Increase of numbers; 3. Increased authority. It has already been pointed out, both in the essays under discussion and in my remarks on them, that there is no training in stokehole duties for second-class stokers on entering into the Service; that the only training they have consists of duties connected with discipline, gunnery, musketry, boat pulling, squad drill, physical drill, etc., etc. All these are very necessary for the young recruit, and the first three or even six months in the Service could not be more profitably employed than in such exercises and discipline. But, if these be so important, can we consider training in the work which is to be the principal employment during his service life, of secondary, nay even less, of *no*, importance to the country and the Service? Why do we train our blue-jackets so extensively? (Their whole life in the Service is really one long-continued training.) Is it not that we may, if possible, render our men superior to those of any other Navy, so that in time of war the heaviest battalions may not always have the victory? It has been said—I cannot vouch for the accuracy of the statement—that it takes five years' training, at a cost of £300, to make an efficient seaman. The cost of training a second-class stoker is difficult to estimate, but at present it consists chiefly in things not, or at best imperfectly, done; in the gradual but almost imperceptible deterioration of machinery, and the diminution of up-keep generally throughout the department. Our young Engineer officers are almost as badly off. They have a certain amount of training, it is true, but it is of a most restricted nature, and is confined to a few days during the last year of their time in the dockyard. The E.R. artificers have no training whatever; not even the disciplinary course through which the stoker recruits are put. Some of them, however, keep watch, or tend machinery in motion, until they get into the Reserves, where they may have some opportunities of attending trials; or are sent out for a short course of training in torpedo-boats. To make the E.R. staff thoroughly efficient, it is necessary that a regular system of training in sea-going ships of modern design should be inaugurated without delay; and the British Navy will not attain its highest condition of fighting efficiency until such a system has been inaugurated,

and been in full working order for some years. With present complements, it is as much as the staff can do to run a normal-draught trial of four hours' duration without assistance from the deck, and by detaching all hands from other duties. Everything must be dropped when the quarterly trial becomes due; or an order is received from the commander-in-chief to proceed with all dispatch. Every engineer, artificer, and stoker is then required to drive the main engines; and not unfrequently it is found necessary to put them into two watches instead of three. What is required is to place the Navy in such a position that we can not only propel ships at almost their utmost speed, but fight the guns and work torpedoes also. In most cases it will be found that an increase of the E.R. staff is required to the extent of 25 to 40 per cent. In other words, about one-third of the present number should be added to the *personnel* of the engineering branch to supply the ships already in commission. At present, the chief engineers of our ships have no command over their own staff, except that of issuing orders; they have no power to enforce those orders but through the executive officers. That is to say, in the event of any disobedience or neglect of orders, or the commission of any offence by any member of the E.R. staff, the chief engineer cannot award any punishment; nor can he reward any act of merit, except through the commanding officer. This naturally deprives him in a very great measure of that respect and deference which follow or attend the possession of disciplinary power and authority. But this is by no means the worst feature of the present status of the Engineer officers of the Navy. Being civilians, or on the list of civil officers, the Engineer officer, no matter how high his rank, is subject to the orders and control of the most junior officer of the executive branch, who may for the time being be the officer in command. It will be answered that all officers of the civil branch are in a similar position. Theoretically, this is true; but, practically, it is not so; and for this reason, that Engineer officers are borne in ships, from which other officers of the civil branch are, by the very nature of the Service, excluded. This is especially the case in ships in Reserve, where it not unfrequently happens that a Warrant officer—either gunner or boatswain—may be the only executive officer borne. How easily friction may arise between the superior civil officer and the subordinate military officer, requires no very great stretch of imagination to conceive. That such cases do arise, it is hardly necessary to state. That they should be impossible is equally self-evident. The remedy is, to make all Engineer officers executive or military officers.

Captain ARTHUR W. MOORE, R.N., C.M.G. (H.M.S. "Britannia"): It is obvious time will not permit of my touching on the many interesting points in these essays. I wish however to offer a few remarks on the all-important question of the entry and training of executive officers. Both essayists advocate later entry. Commander Honner would take young men from school at eighteen, and there is rather a formidable list of subjects which he would expect them to bring up for their examination. I do not see any mention of navigation, but I suppose that comes in under the head of "Seamanship, etc." Captain Eardley-Wilmot would increase the age of entry, and is in favour of open competition. Now, I know there are many officers, and no doubt many here present, who would view with great distrust any departure from the old-established custom of entering executive officers young, but I would like to point out the altered condition in the life of the midshipman in the sea-going ship at the present time to what it was thirty or forty years ago. Cadets then went to sea at fourteen, became midshipmen of the watch first on the quarter-deck, then on the fore-castle, when the officer of the watch trusted to them to look after the head-gear, the foretop-gallant-mast, and so on. They were then allowed to take charge of the watch at times, and at the end of five-and-a-half years' sea-service midshipmen came up for their examination for lieutenant with a real, sound knowledge of seamanship, and had also learned thorough navigation and some mathematics. What are the conditions now? Cadets go to sea at sixteen on the

average, and serve for three-and-a-half years as midshipmen; but what are they doing? Their forenoons are generally devoted to school: the study of elementary pure mathematics chiefly, and some navigation; in the afternoon they have instruction in gunnery, torpedo, seamanship, and other subjects. As midshipmen of the watch, after school hours, what have they to do? The officer of the watch is on the bridge with one helmsman at the steam wheel, and all the midshipman has to do is to go occasionally round the ship. The only hours he has an opportunity of learning seamanship are during the forenoon and afternoon when there are tactical evolutions and drills. In one ship he is sent on deck when there are evolutions, but in another ship you find that he is never allowed to be away from school. If these are the conditions, if this scholastic work is to go on, it is impossible for a midshipman to receive that training as a seaman and as an officer which has been the custom in the past. I think there can be no doubt the Naval officer of the present day does require a higher mathematical knowledge than formerly; but what many officers object to is the constant teaching of elementary pure mathematics at sea, to the detriment of professional training. It surely cannot be right, and if you look at the results of examinations you will find there is not much progress made. I would not suggest any very drastic change, and cannot go with Commander Honner in his suggestions for so late an entry; but there is a great deal in Captain Wilmot's paper which I do agree with. I think if we were to send midshipmen to sea slightly older, with a solid ground-work in mathematics, they would become effective in a shorter period. I think it is far better to have a shorter time as midshipmen, and to take up responsible duties in the ship earlier than they do now. As far as competition goes, it is rather a delicate subject. I have no doubt there is a great deal to be said for and against both systems. But without committing myself to any opinion on either, I think it perhaps is not well to unduly limit the area of selection. I am very sorry there is any diversity of opinion on the necessity for utilising a training squadron. I know what I owed to the training under my first captain in a ship that was always under canvas, and I do hope and trust our young officers will have the advantage of being trained in a squadron or ship under canvas, to follow after the training in the "Britannia." There are many who say it is a thing of the past; and I suppose those people are perfectly satisfied that our coal supply is practically inexhaustible. But whether it is a thing of the past or not, there is something in that training which does make the man, and I hope it will always form part of the training of our young officers and seamen.

Lord Hopetoun having to leave, the chair was taken by Admiral Sir John D. Hay, Bart., K.C.B.

Staff-Engineer R. W. EDWARDS, R.N.: Mr. Johnson has already said so much with regard to the branch of the Service to which I belong, that I think very little is left for me to say. I should like to make one or two remarks about some points not touched upon by previous speakers. The whole of the essayists draw attention to the fact of the insufficient number of candidates for the engineering branch of the Navy. I would like to point out what, in my opinion and in the opinion of many other persons, leads to the small number of the candidates. I happen to be at the present time in the North of England at a large engineering establishment, superintending the construction of the machinery of my ship—the "Powerful"—and I come across down there any number of young engineers who have gone through a course of training with the Naval Construction and Armaments Company who would make most excellent naval engineer officers. Yesterday I met the father of an engineer officer who had joined the Navy from this company, and he told me that he did not consider the position of a naval engineer officer was good enough, considering the cost his youngster's training had put him to. He said, "I spent £400 or £500 on my boy's education, and I find now that I have to keep him going in the Service." That clearly points

to the fact that the young fellows, whom we would like to get into the Service, and who get their training in outside firms, do not consider the Navy good enough on the present terms of pay. There is another point which prevents them entering, and that is the peculiar position of the naval engineer, who appears to them to be in the Service, but not of it. There is nothing whatever in his official designation to show that he is a Naval officer or that he belongs to the Navy. When people outside a dockyard, port, or ship of war talk about a naval engineer, the ordinary idea in their minds is that he is something like a penny steamboat man, or the driver of a locomotive on the railway. They do not recognise that he belongs to the Navy at all, and it is not until people get to know him that they begin to find out what he is. Youngsters outside note these things, they see how the position of naval engineers is not understood, and they do not think it is good enough to join a Service in which they get no defined position, for they think they can do better on shore. I am talking of the direct-entry men, the men who get their training outside in civilian establishments. Of course, you can get any amount of youngsters at the age of fourteen to sixteen to enter the Engineer College at Keyham; there is never any dearth of youngsters at that age for any profession. Boys have not cost their parents so much to educate, and parents are glad to place their sons in any profession which is at all decent or respectable. With regard to the remedy, I go entirely with Captain Rose; I think his essay hits off what I and many naval engineers consider should be the position of the engineer branch in the Navy. It should be made a regular branch of the Service, a distinct arm, and its members should be made to feel they are part and parcel of the Service. There is now no feeling of any social inferiority on the part of the engineer officers in the Navy itself. I have been for over twenty years in the Service, and I must say as far as my experience in the Navy itself goes, that my ward-room messmates have been all I expected them to be. There has never been any question whatever of any difference of treatment or any idea that one kind of officer is inferior to another. My brother-officers there are all gentlemen, and that is all that need be said. But the point I wish to make is that the position of a naval engineer is not understood outside the Navy, and I think if it were improved on the lines suggested by Captain Rose that you would get at once a very steady flow of candidates for the engineer branch. I am quite convinced of that. Mr. Johnson has stated that an engineer officer has no executive authority in his own department. We now have over 18,000 stokers and nearly 2,000 engine-room artificers, so that roughly, including the engineer officers as well, the engineering branch numbers about 22,000. In the old days, when the engineer complement of a ship was very small, you had your men under perfect control. You simply went below, down one ladder, and found all your department in front of you, under your eye; now your men are all over the ship; your complement, instead of being numbered by tens and twenties, is numbered by hundreds. In my own ship there are, roughly, 300 in the engineer branch. The engineer officer has control over all these men in his own department. It would be a great help to this officer in keeping up the discipline of the department if his men felt that he had the power of punishing them for minor offences, and of enforcing his orders. Time is very often wasted now, and if a man offends it is often highly inconvenient to take him on deck and report him. The man has to be sent away to shift into a clean rig before he can go on the quarter-deck, and much time to the department is wasted, and so you are very often tempted to look over the offence, or to take it out of the man yourself in some other way. When you have some work on hand that may not be agreeable you may give it to him to do by way of punishment, but it is not a regular or a legal way, and the man has then a right to complain if he wishes to do so. I think the position of the engineer officer should be improved in this respect, and that he ought to command the men in his own corps. I do not mean that the engineer officer should be able to command anybody outside his own corps; that would be absurd, and no

engineer officer has ever thought of it ; he simply wants to be an executive officer in his own department, and to have the style and title of an executive officer so as to indicate his position, not only to people on board ship, but to people outside who may know he is a Naval officer, but do not know his rank. People do not know who you are, or what you are. You cannot go about and say, "I am staff engineer, ranking with a major in the Army, or a lieutenant in the Navy," you cannot have that placarded on your back. A great many people feel that engineer officers should be given a proper designation to show they belong to the Navy, and have some real connection with the Navy. There is one point no one has touched upon, and that is the Reserve of engine-room artificers. It strikes me there is good material for forming a Reserve of engine-room artificers in the fitters and boiler makers and engineering workmen generally in our dockyards. I have never heard the idea mentioned before, but it seems to me we have a fine field there for forming a good Reserve. Dockyard engineer workmen are the very class you want to get in the Reserve; they are always employed in the repairing of engines of war-ships, they are good for all naval engineer purposes, and if once brought accustomed to naval discipline, they would be as useful as the engine-room artificers we now have in the Navy are. I think it is well worth the attention of everybody to try and form a Naval Reserve out of the dockyard workmen. They are fitted for it by training, and they certainly would be a much better class of men to get in as Reserve men than the greasers (suggested by Commander Honner) from the mercantile marine. Mr. Johnson has said nearly all I intended to say. I might add that I am a little surprised to find in essays which deal with the changes that have occurred in the composition of our war-fleets, which changes have been brought about entirely by the introduction of steam, that so very little has been said about the engineer branch of the Navy; but possibly the writers of the two prize essays not having a professional knowledge, or not having a very close knowledge of the subject, very wisely avoided saying too much about it. I think Captain Rose has hit off what I consider should be the ultimate position of the engineer corps in the new Navy.

Vice-Admiral BOWDEN-SMITH: We are met together this afternoon to discuss the Naval Prize Essay, and also the interesting paper which has been contributed by my friend, Captain Eardley-Wilmot. I will confine myself entirely to those papers, and only consider two or three subjects mentioned in them, as our time is so limited. One of the most important suggestions in Commander Honner's paper is the proposal to create a Reserve to take the place of our Royal Naval Reserve forces, and I think his proposition as to having our ships in future manned by two-thirds long-service men and one-third five-years' men, the five-years' men afterwards to be drafted into the second and third-class Reserve, is worthy of consideration. The question is, Are the numbers that he quotes as necessary sufficient for our requirements, and could we expect that most of these five-years' men would continue in the sea service after they pass through our ships? Again, could we ensure the ships of our mercantile marine employing them, or could they be induced to do so on the consideration that a certain number of ships of each company so employing them are placed on the Admiralty subsidised list, or that the companies themselves were in receipt of Government postal contracts? We must remember that it would be unwise if our steamers carried too large a proportion of Reserve men. They should certainly not have more than one-third, or one-half at the outside, because, as it has been pointed out by one of the speakers, if on the outbreak of a war we took many men out of these ships, or took the vessels themselves off their important trade routes we should be distressing the country just at the very time when we want everything to go on as usual. However, Captain Eardley-Wilmot in his essay notes that during a war our sailing-ships and many of our slow steamers would be laid up, so that some of the men at present serving in them would be available to fill up the places in the larger ships. I will not take up



any more time upon this subject, but will pass on to what appears to me one of the burning questions of the Navy, and that is the position of the lieutenants' list. We have been very short of lieutenants of late years, there is no question about that, and there is also a difficulty as to suitable occupation for the senior lieutenants who cannot be promoted. I do not think there is anything to complain of as regards the retirement of lieutenants. If you compare a lieutenant's future with the professions on shore, such as the Bar and the Church, I think the retirement is a very fairly good one, but we want some further outlet on the active list for those lieutenants who after ten years' service see no reasonable prospect of promotion before they retire. Of course, it would be very easy to increase the lieutenants' list to any extent by continuing to enter more and more cadets, but we should only be accentuating our difficulty at the other end, unless we provided some additional outlet for lieutenants of ten years' standing. In order, therefore, to increase the lieutenants' list in an economical way, and at the same time to provide some outlet for lieutenants of over ten years' standing who cannot get their promotion, I am inclined to think Commander Honner's proposal of abolishing the accountant branch altogether and relegating their duties to the executive officers is well worthy of consideration. In small ships the paymaster's duties would be undertaken by a lieutenant or sub-lieutenant (for a consideration, of course), in addition to his own duties. In the larger ships we should have lieutenants of ten years' standing, specially qualified who engage to do the work, and who as accountant officers would be excused all other duties except in cases of emergency. Of course, a lieutenant who accepted the position would receive considerably higher pay than other lieutenants, but would renounce all claim to promotion on the active list, though he should certainly have additional rank on retiring, if not relative rank before, and lieutenants who accepted that position might reasonably be retained on the active list till a later age, perhaps till the age of fifty. It must be remembered that in our very small ships at present the accountant's work is done by a lieutenant or sub-lieutenant. Recently, when I was in Australia, there were two or three little ships under my command, where the accountant work was done in this way by an executive officer, and I never heard any complaint that the accounts were improperly kept, or that the men were not properly victualled and clothed. We must also remember at all our Marine Divisions where there is a large number of officers and men, the men are clothed and paid without a special accountant officer being considered necessary, and, I understand, the work is well done. Some of our ships are at present very under-officered as regards executive officers. Take the case of the third-class cruisers, which have a captain and three lieutenants only, and no other executive commissioned officers. I remember quite well that on one occasion when one of them was on a distant part of the station in Australia, and engaged on important work, I received intelligence that the captain and two of the lieutenants were on the sick list, leaving only one officer fit for duty. I could not give them any assistance because that ship was hundreds of miles away. But if that little vessel, instead of having a paymaster, had borne a fourth executive officer, a lieutenant or sub-lieutenant, one of them doing the accountant officer's work in addition to his own, I think she would have been very much more efficient. I will quote one other case which came under my notice quite recently. Five assistant-clerks were sent out to Australia for distribution in the squadron to learn their work. They were all additional to the complements, and I think I am right in saying that the captain of every ship to which these boys were sent wrote and asked me if they could not be removed to some other ship, on the plea that they were of no use, and occupied valuable space. Surely if we are going to retain the accountants' branch we might dispense with entering these boys. We might engage young men between eighteen and twenty, and after two years' service as clerks they could be promoted to assistant paymasters, and we should thus save the space occupied by them, and their still

more terrible sea chests, bearing in mind that every additional chest takes away room from the rest of the ship's company. If this proposal of abolishing the accountant branch were carried out, I think we might eventually add some 300 executive officers to the Navy without increasing our burden; and, as we should at the same time provide an additional outlet for the senior lieutenants, we should lessen the promotion difficulty. Of course, the present accountant officers would continue their duties until they retired in the usual way, when their places would be filled by executive officers. Some years ago when we abolished the navigating class we transferred some 300 officers from one list, where they never expected any promotion, on to the lieutenants' list, where they expected to take their chance with the rest, and we increased our difficulty as to finding a future for the lieutenants; but by taking the step I propose, we should not increase, but lessen, our promotion difficulty. I am very glad to notice that both officers, whose essays we are considering, not only advocate the retention, but also the augmenting, of the Marines, and I entirely concur with Commander Honner when he says, "the Navy is proud of the Marines." From the time I first joined the Service, when my dear old Marine servant used to look after me and my chest, and bully me if I put on too many clean shirts in the week when we were at sea, until quite recently, when I had some of these excellent men as orderlies about me, I have loved the Marines, and during the ten consecutive years I was executive officer in various ships, ranging from a sloop to an ironclad, I thoroughly learnt to value the qualities of these excellent sea soldiers. I would like to see the Force augmented as is, I believe, proposed by one or both essayists, for I look upon them as the most valuable Reserve we have. I quite admit, as regards the officers, it is very difficult to find suitable and proper employment on board ship; but, if I look back fifteen or twenty years, I consider they are made very much more use of than they were sometime back; and, as regards all battle arrangements, they are thoroughly utilised on board a ship. I do not agree with the proposal that they should be instructed and made watch-keeping officers. Whilst I am on the question of the Marine, I must just notice what has fallen from Major Brittan, who favoured us with his views on the subject. I was rather surprised to hear him say that, as regards discipline and punishment, the Marines were entirely taken out of their own officer's hands when embarked on board ship. That has not been my experience; and certainly, as far as I know, the minor punishments and discipline connected with the Marine Corps are dealt with by the senior officer of Marines. They certainly have been in ships I have commanded. When it comes to questions of leave breaking and other matters concerning the discipline of the whole ship's company, whether they are seamen, marines, or stokers, if the executive officer does not deal with them, it comes to this: that in a ship with 600 or 700 men one man is dealt with in one way and another in another, and they are not punished alike. I do not see how it is possible to alter the system. But as far as the Marines go, and as far as the engine-room staff goes, I am in favour of their own officers dealing with the minor punishments connected with their own work and with their own discipline, and certainly I think my brother-officers will agree with me that as far as regards the Marines this is the practice. I was very much surprised to hear the gentleman who spoke say it was not so.

Major BRITTAN: I said it was not as a matter of right.

Vice-Admiral BOWDEN-SMITH: Possibly not by right; but, at all events, by practice and custom. I will only draw attention to one other subject. Both essayists have touched on the education system and the training of cadets, and as I was once captain of the "Britannia," and as I have myself visited and personally inspected the "Borda," at Brest, the American Naval Establishments at Annapolis, and the Dutch Training School at Helder, I should like to say a few words on this matter. We have been quite recently informed that a new departure is about to be made, and that the boys are to be transferred from the hulks in the river to a college on shore

at Dartmouth; they are to be entered at a slightly increased age, and to remain eighteen months under training instead of two years, as at present. With regard to their being moved to the college on shore, I am glad to hear it. I think the advantages, if any, are in favour of the establishment on shore, so long as the boys can get to the water easily. Where they are now in the ships in the river they are between the hills on either side, and do not get enough sun, and the ships, being moored head and stern, are very much subject to draught, and, consequently, the boys suffer a good deal from colds and coughs, especially in the term between Christmas and Easter; and, I am inclined to think the health of the boys will be considerably improved when they are put in a college on shore. When it first leaked out that the age for entry was about to be increased, I was one of those who hoped the reason to be given would be that the authorities, by increasing the age limit, would see their way to throw the Service open to competition, instead of retaining the nomination system and limited competition, as at present. I also hoped that there would be some scheme proposed by which we could abolish the necessity of having naval instructors in sea-going ships, and I must therefore confess to a certain feeling of disappointment, if I may say so, when we were told that the principal reason for increasing the age of entry was to enable some of the boys to pass some of their time in public schools before joining the Navy. And here I am in accord with Captain Eardley-Wilmot, who advocates open competition for naval cadet-ships. It was unwise to do so when the boys were entered very young; but if we increase their age, I think it might be attempted with advantage, and I agree with him that we should not suffer in any way, but should get a better average all-round boy, and I further agree with Captain Eardley-Wilmot, that every scholastic establishment in England should be placed on an exactly equal footing, and as few restrictions as possible placed on the privilege of entering the Navy. My experience, however, is very different to that of the gallant officer in command of one of the ships in the training squadron, who, when mentioned by Captain Wilmot, found fault with the present training on the "Britannia," and who further expressed surprise because one of the midshipmen who was with him did not know who Tasso was. Well, gentlemen, I should be very much surprised if a midshipman did know who Tasso or any other Italian poet was! I would much rather he knew something about Captain Cook! I believe the boys are exceedingly well taught in the "Britannia" as they were also, I maintain, in my time; and although it is the fashion with some officers to condemn both the system as well as the instruction given, I believe, if you take any number of "Britannia" boys—say a dozen or twenty—and compare them with an equal number of boys from any school in England, the "Britannia" boys will compare very favourably. In conclusion, gentlemen, I think you will agree with me that Commander Honner has well earned the gold medal which the Council of this Institution have awarded him on the recommendation of the referees.

Lieutenant E. H. SMITH, R.N., H.M.S. "Calypso": I fully endorse what Captain Moore says as to the small amount of knowledge which youngsters get of their profession in ironclads. It is wonderful the progress they make in the short time they are in the training squadron. For that reason I sincerely trust that, under no circumstances, will the squadron be done away with, but rather that it may be so increased that we may get an opportunity of having every officer through it. At the present time many of them do not serve in the squadron, and some go to brigs instead. I do not think anybody with knowledge of the difference between brig and squadron work will compare the two trainings. I think it is impossible to compare them. In brigs they have a small amount of sailing work, and practically no heavy spar drill at all; in the squadron there is not a single exercise known to seamen that they do not learn, and there is not a single thing in gunnery which we do not try to teach them. I may say that they have an opportunity of learning everything; tactics included, connected with a Naval officer's work, most thoroughly. As regards work in the squadron,

everything is subordinated to their work as officers. They are at school in the forenoon, but they are always taken from school if there is any work going on on deck, and they are never excused their watch or boat duty on account of school under any circumstances.

Lieutenant W. C. CRUTCHLEY, R.N.R. : The writer of the Prize Essay has touched very largely on the question of the merchant service, Reserve of seamen, both officers and men. He asks in the first place : "Is the Naval Reserve, by its constitution and drill, equal to the position it now occupies in the scheme for manning the fleet?" That is rather a large question, and I may say, as a member of that Force, I am most entirely in accord with the conclusions he draws : that the Naval Reserve, though capable of very great improvement no doubt, still has made great progress within the last twenty years. I think it is becoming generally recognised now that there must be very great affinity between the Navy and the merchant service. The tendency of the merchant service is to build large vessels which will reduce the number of men employed ; and, if would almost appear as though we shall revert to first principles, and that every man who goes to sea must be trained as a fighting man. There are a very great number of eminent authorities who hold that opinion somewhat strongly. But the scheme indicated in this paper, that lad should be taken at the age of nineteen or twenty, and trained for five years in the Navy, and then sent back to the merchant service, is, I venture to say, an unworkable scheme. In the first place, you would send a man at the age of twenty-five into the merchant service to take to a business of which he knows nothing. On the other hand, if you apprentice boys for training, say three or four years, first, in the merchant service, and then pass them through the Navy and turn them back into the Reserve to serve in the merchant service, it would be of the very greatest benefit. The merchant service at the present time is not in quite what I should consider a satisfactory condition as far as men are concerned. The number of British seamen gets proportionally worse and worse year after year, therefore I think the system I suggest would be beneficial to both Services. With regard to the officers, it is suggested that there should be two classes—first and second class. I think the suggestion is eminently good, and all men in the merchant service will admit that the more they see of the Navy the more they find and appreciate the advantages to be found in its training, and the more they will avail themselves of it if facilities are given. I think the men who have had twelve months' training in the Navy have turned out remarkably good men ; and, if you will carry out that principle a bit further, I think you will find a good Reserve of officers in the merchant service. The restrictions proposed on the ships carrying the blue ensign are most excellent, and I do not know that I have exception to take to any of the statements in the paper. It is a matter of very great satisfaction, I may say, both to myself and to the merchant service generally, that a Naval officer takes so broad and comprehensive a view as to the relations between the Services.

Engineer L. E. THUMWOOD, R.N. : I am very pleased to follow Lieutenant Crutchley with a few remarks about the Engineer Department of the Marine Service. Some disparaging remarks have been made by both prize essayists against the engineers of the mercantile marine ; they intimate, with regard to those in charge of the engine-rooms of some of our largest Cunard and other liners, that their room would be better than their company, especially in torpedo-boat service. I can only say I very much regret to see that both prize essayists attribute no ability whatever to, or fail to recognise the ability of, any of the mercantile marine engineers. I may say that I should be proud indeed at any time to have these men as comrades in the engine-rooms even of a torpedo-boat destroyer. One of the essayists goes on shortly afterwards to state that this Naval Reserve engineer is absolutely unknown to the Navy, and he not only states that, but he continues criticising the same officers, whom, he admits, he knows nothing about. I could hardly let that pass without notice. Also, both prize essayists, although

admitting the serious deficiency of Engineer officers in the Royal Navy—and the Gold Medallist, I think, says that we should be 170 Engineer officers deficient even after taking 70 boys from the Engineer College, after only three years' training, to assist in the Navy as officers—omit to discuss any scheme for filling up the junior rank from chief engine-room artificers by promotion to Warrant rank, although admitting the ability and value of these men, by styling them so rightly the backbone of the Engineer Department. They enter as Chief Petty Officers, and if they do not die in the Service they retire as Chief Petty Officers. The second prize essayist mentions a sense of isolation felt by the Engineer officers of the Royal Navy. I do not know any Engineer officer of the Royal Navy who feels socially or professionally in any way this isolation. I may say for myself I have felt very much part and parcel of the Navy. The Essayist mentioned that, certainly in a most graceful manner; still he alludes to a lack of co-operation and sympathy between the executive and the engineering officers of the Service. I deny that it is at all wanting even in time of peace, but in time of trial, rest assured, a perfect co-operation and mutual accord would be found to exist. The subject under discussion is an intensely interesting one to most Naval officers, and the difficulty is to reduce one's remarks to a small compass.

Captain J. M. ROSE, R.M.A. : I do not think much comment has been made on my essay. I am very pleased that my ideas should accord with those of the Naval engineers present; they were written with my earnest conviction that they would be for the good of the Service. Major Brittan has given you the ideas of the officers of the Plymouth Division, but who at that time had not read my essay. I think it will be found that those views were entirely in accord with what I have expressed in my essay, and I believe them, as a rule, to be the views of every Marine officer. We do feel that although we are allowed to punish our men by the kindness of the executive officers, there is something lacking in the extent to which we have charge of our own men. We should like to sit on courts-martial at their trials, and that seems to be the ordinary principle of English law. The admiral who spoke just now said it was necessary for the executive officer to punish all those men who had committed such offences as leave-breaking, that it was necessary for the discipline of the ship that the punishment should be the same. But a young Marine going on board ship is in a very different position to a blue-jacket boy who has been accustomed to ship life for some time: the one is accustomed to the routine of the ship, and has not been used to so much exercise ashore; the young Marine has had a very hard training in exercise ashore, and he feels just at first the restraint in a different manner. That difference the Marine officer understands—he understands the Marine; there is a difference that is very hard to define, but I am sure the Marine officer knows the feelings of the Marines better than Naval officers. I have seen it in many cases and, therefore, it may only be in accordance with justice that a different punishment should in certain cases be given by a Marine officer who would be more in sympathy with the men. That is only a side point. Captain Eardley-Wilmot suggests in his essay that we should take over the whole musketry training of the ship. I think that would be a great step in advance. It has been said that it is difficult to find any work for the Marine officer. Surely our knowledge of musketry must be greater than even those gunnery lieutenants who have given some considerable time to the subject. The questions of tactics and fortification are all wrapped up with the question of musketry. We have a higher training in musketry subjects, and we are only too delighted to do any work we can to help on the ship. I do not think we require training in navigation, or to keep watch. I think that that would be at present too great a step. But at any rate in musketry training more assistance to the gunnery lieutenants, I think, we might give, and in many ships I think those Marine officers who have been through the advanced "Excellent" course, and have, therefore, qualified in gunnery to as high a level as the first-class gunnery lieutenants, might be

appointed for gunnery duties to ships not carrying gunnery lieutenants, and even in some cases might replace them. You are constantly complaining that you are short of watch-keepers, yet officers trained to be watch-keepers are excused keeping watch to a considerable extent when performing gunnery duties; we might do that work, and give you the extra watch-keepers without making any addition to the promotion question. We have this very much at heart. Let us help the Navy: our only desire is to make ourselves more useful. If the Council or anyone would only help us in this, it would be some assistance to the aspirations of a body of men who have always, at any rate, been loyal.

Major A. F. GATLIFF, R.M.L.I.: In the Navy we are all specialists, and I shall only speak of my own corps. I wish to point out that in the old days, in times of emergency, the Navy embarked line regiments. Then the time came when you had the press-gang. I believe the law is still in force, and has never been abrogated by Act of Parliament, but the practice is not possible at the present day. We have heard also that the British seaman of the mercantile marine is a diminishing quantity, and, moreover, would be requisite at the outbreak of war to keep up the food supply of the country; therefore, as these sources of gap-filling are cut off, I maintain that the real Reserve of the Navy are the Marines. They are the cheapest to get, and their training takes the shortest time. There are several points in the essays that I would like to refer to. Both Commander Honner and Captain Eardley-Wilmot seem to forget that the value of the Marine is derived from his dual training; he not only serves on board ship, but he serves on land, and I take it the ideal Marine is one who would have served half his time on board ship and half on shore. There is no doubt that the dual training brings forth qualities which are found neither in the sailor nor in the soldier, and as witness to that I appeal to the statement of Lord Charles Beresford. Everybody knows what an ardent upholder he is of the British Blue-jacket; but yet he was forced to say that when Alexandria was put in order from chaos it was due to the Marines. Let me give just one quotation:—"I could never have done this but for the service of 600 Marines from the fleet. It would be impossible to have done it with any other body of men, either soldiers or Blue-jackets. The Marines had all the go and readiness of resource of the Blue-jacket; at the same time they had the firm, steady discipline of soldiers which was so necessary for the arduous, irksome, and responsible duties we had to do." Commander Honner and Captain Eardley-Wilmot seem to have forgotten that point of our dual character. Commander Honner objects to our battalion going to Aldershot. Our aim is to help the Navy and our own corps; we wish to do as well as we can, both on board ship and on shore. We go to Aldershot to learn the best means of fighting on shore in the same way as one goes to the "Excellent" to learn the best naval gunnery. Commander Honner said this movement to send our battalion to Aldershot should be looked upon with suspicion. I cannot see it. We are only trying to do our duty best in our dual capacity. If he thinks we are entirely and absolutely, wholly and solely, for service on board ship, his view is, perhaps, logical; but if he is right, it would be still more so to turn us into Blue-jackets altogether. But that is not our view at all: we think we are, as our motto implies, for service on land and sea—*Per mare, per terram*. As regards this question of Reserves, you cannot, moreover, get a sufficiently numerous Reserve of Blue-jackets from the Navy itself for many years yet. Besides, how are you to get your Reserves on board your ships on a foreign station on an outbreak of war? How are you to get them out of England? You must have them on the spot. I maintain, therefore, that at all our Colonies you should have Marines or Marine Militia or Volunteers, and then they will supply the wastage coming from action or casualty of any sort. Perhaps it has never occurred to the writer to consider the difficulties there would be to get your Reserves on board when war breaks out with a strong naval combination. If you had your Marine Militia or Marine Volunteers at all these ports abroad, you would have them on the spot,

and the Admiralty could put its hand on them at once. One other point I would notice is, that although both essayists speak sympathetically about our employment in the highest ranks, at present we have nothing to look forward to. A boy of good brains who goes into the Navy, or a young officer going into the Army, has a career to look forward to: our career, except for one man, ends at colonel-commandant, and that thought is very chilling. We have no outlet beyond that. It does not matter how good a man is, he can never be employed as a general officer, and of course the conditions of the Service prevent him being employed in the higher ranks of the Navy. If the Admiralty would take the suggestion of Sir Charles Dilke and take over the coaling stations, then you could establish single control by one great department. Take the case of Bermuda. There you have soldiers and sailors serving together. What on earth is the good from a defence point of view of a line regiment, and all the artillery and engineers there? If the admiral knows his business—and I have never heard of one who did not—no hostile force could possibly land there. But, on the other hand, the admiral could not use the linesmen, or gunners, or sappers on board ship, no matter how great his emergency, or how severe his loss. If the Admiralty would take over Bermuda, which is purely a naval base, and put Marines there under a Marine-General, the Admiralty could command the whole thing, the men could get their naval training, and we could have some chance of serving otherwise than in a subordinate position. I thank Admiral Bowden-Smith for the kind way in which he spoke about our corps. We are like the Uitlanders: we desire to attain a certain position to which we think we are entitled, and we do ardently wish to have some real responsibility in the great Service which we have helped to make, and to which we are thoroughly loyal.

Captain GARBETT, R.N., Retired: As I lately had command for three years of one of the Naval Reserve drill-ships, I may say that I agree most cordially with the observations which Captain Eardley-Wilmot makes in his essay with regard to the somewhat unsatisfactory status of the so-called second-class Reserve, and which is the cause of a certain amount of legitimate complaint among the men forming it. I have been often told by men among them, that they feel it a slight to be considered by the Admiralty as only second-class men and to be debarred from certain privileges enjoyed by the first-class. I have never been able myself to understand why the distinction is now kept up between the first and second-class men in the Reserve. The first-class men are rated able seamen, but the second-class men, mainly drawn from the fishing and coasting population round the coast, are only rated ordinary seamen. Now, my experience during the three years I had to do with the Naval Reserve was that, taking them all round, the second-class Reserve men, physically, morally, and as seamen, are at the present day far superior to the general run of the so-called first-class Reserve men. When the Admiralty some time back reduced the complement of Reserve ships we were thrown very much with regard to the ordinary work in the ship entirely on the Reserve, and we have had to wait for weeks when the fishing population did not come on for their drill before we could get men who were competent to do the most ordinary work of seamen on board ship. The so-called first-class men as a rule were helpless; as far as seamanship was concerned; they could not splice or point a rope decently, strop a block, or pull an oar. They were really not seamen in any sense of the word, and it was a mystery to me how many of them ever got their certificates. When the Naval Reserve was established some thirty-five years ago, a splendid body of really fine seamen could be drawn from the beautiful clipper-ships, which at that time, and for some ten years afterwards, carried our trade to all parts of the world; but times are now changed, the clippers have vanished, and in their place we have the "canal-wallah" and "ocean-tramp"; and although men serve still as apprentices in sailing-ships, it is quite impossible for them to remain seamen in the best sense of the term, in an "ocean-

tramp"; and they do not remain seamen, except in rare cases. Now, the bulk of the second-class Reserve men are, on the other hand, undoubtedly good seamen, because such very large numbers of them spend nearly their whole time in battling with the sea. The East Coast fishermen, both Scotch and English, I believe to be among the finest seamen in the world. They do not remain on their own coasts; they follow the herrings, for instance, down the coast of England, the Channel, and out into the Atlantic; and I believe, if these men had only proper inducements held out to them to join, and the time for drill was increased from four to eight weeks, half of which should be spent on board a regular man-of-war, we should soon have a very efficient Reserve; they are much more amenable to discipline than the first-class men; they learn their drill much quicker, they retain it much better, and in war-time they would be far more valuable as a Reserve than the first-class men, simply because they are on the spot; and I do not see how you can get hold of a large proportion of the so-called first-class men on the outbreak of war. I believe as far as organising them is concerned, it is merely a question of money. Some three years ago, when I was trying to get Naval Reserve men to volunteer to serve in the fleet during the manœuvres scarcely anyone came forward. When the question was discussed afterwards during our annual inspection the men were asked by the inspecting captain why it was that none of them came forward, and the answer was in every case the same—that it was not worth their while. The Admiralty offered £1 bonus in addition to pay, and it was not good enough for them, they made more by remaining on the fishing grounds. They had no objection to serve, but they said they could not afford to lose by it. Therefore, it appears to me that the Reserve can be made far more efficient in a short time, both in numbers and drill, provided the country is only willing to spend the necessary money—I do not think it need be very much—so as to make it worth the while of these fishermen and others to join the Naval Reserve, which they will not do under existing circumstances. Commander Honner proposes to create a Reserve in fifteen or twenty years by his scheme, but we want to increase our Reserves now, and we can only do that by using the present material we have to our hands. A system of short service may provide us with a Reserve in the future; but I doubt it, because I do not believe that any smart youngster, after serving five years in the Navy, will descend to the squalor and discomfort which is the general lot of the merchant seaman of the present day.

Commander the Hon. H. N. SHORE, R.N., Retired, being unable to be present at the discussion, has forwarded the following remarks:—

Of the various matters that come under discussion in the essays selected for publication, none are of higher importance than, 1st, the entry and training of executive officers; and, 2nd, the efficiency of the Royal Naval Reserve. Taking the latter first, there can be no doubt that the sweeping assertions of the Gold Medallist as to the indiscipline and inefficiency of the force will come as a painful surprise to many, and as one who had the honour of being closely connected with the R.N.R. for several years, in Scotland and England, I should be sorry to see such a wholesale condemnation of the force go forth to the world without a word of expostulation. If the unfavourable strictures had been based on a long and close association with the R.N.R., on personal experience that is to say, the essayist's opinions would, at least, be entitled to respect, however much we might dissent from them; but, from his own admission, they seem to have been reduced from the very slenderest basis of fact. He leads off with an isolated extract from an article by Lord Brassey; instances the antiquated nature of the armaments of the drill batteries, a remark which applies equally to many ships on the strength of the Navy; and then, after drawing an imaginary picture of life on a fishing boat, proceeds to pass a verdict entirely unfavourable and unfair to the force as a whole. The value of this verdict is somewhat discounted by the author's somewhat naïve admission that "the Navy does not know the Royal Naval Reserve." It would be as well, to say the least, to know something of the



force before condemning it, and it is also suggestive that the essayist has not given the opinion of a single officer who has been connected with the training of the R.N.R. Of course, it is an easy matter to set up an imaginary standard of excellence, and then to condemn off-hand everything that falls short of it. Now, the standard which the essayist has set up, if his observations on this head afford an indication of what is in his mind, is a lofty one. He seems to picture a Reserve equal to take its place, in every way, by the side of the regular seamen of the fleet, highly disciplined, versed in all the latest methods of gun and torpedo warfare, and ready to embark at a moment's notice on board the Reserve ships, without so much as having to disturb a single man, in the vessels of the first line; he speaks of the "demoralising and heart-breaking" results of disturbing the companies of ships in commission, as if this was not an essential condition of every system of Reserve. Well, this is an ideal which every officer would like to see realised; but is it not utterly Utopian? In view of the present imperfect state of things sublunary, we must, alas, be content with a much lower ideal. It is useless inflating our minds with mere moonshine; we must descend to the practical in matters of every-day life, and aim at something that is really within reach. The word efficiency as applied to the Reserve is a relative term, there is no universally recognised standard to which all must conform; the efficiency of our Reserve must be considered relatively to the standard prevailing amongst other Naval Powers. The author of the essay seems to be impressed with the higher standard exacted in other countries; he speaks of our own Reserve men as having "to meet with meagre training, the well-trained men of our possible enemies," and evidently sees much to admire in the Continental systems. Whether the plan of passing hundreds of conscripts through the fleet, and discharging them to civil life after the briefest possible training is a sound way of building up a Reserve, must be left to the judgment of the reader; but to suppose that a body of men who have served three years afloat, and are then sent back to civil life to shift for themselves, constitute a "well-trained" Reserve, is manifestly absurd. I believe I am well within the mark when I say that many foreign officers have grave doubts as to the real value of such a force in the event of war. Captain Eardley-Wilmot, in his comparison of the systems that obtain in our own and foreign Navies, calls attention to the facility with which, say, a French Reserve man would drop into the routine of ship-life, on being called up; though he adds the qualifying remark, "if his service has been fairly recent." There is a world of meaning in the "if"! Now it is a remarkable and highly significant fact that the question of Naval Reserve efficiency has been discussed by all three essayists solely and entirely from the point of view of the drill-sergeant, as if there were no other standard of efficiency. But, surely such a method of treatment is unworthy of the high importance of the subject. Not one of the writers—and this also is highly significant—has attached any importance to the fact of our fleet being entirely recruited by volunteers. Few Englishmen, let alone Naval officers, realise the enormous accession of moral strength, immeasurable by the drill-sergeant's standard, which the British Navy has acquired by the frank acceptance of the voluntary system. I can only add what I have said elsewhere, "the world has yet to be shown what a British fleet can accomplish, manned entirely by volunteers." In discussing the training of executive officers it is noteworthy that all the essayists, while frankly admitting [the high professional acquirements of English Naval officers, on the practical side, seek to destroy the very system under which these excellent results have been attained. Why? Because it has for some time been taken for granted that from a scholastic point of view English Naval officers compare badly with those of certain Continental Powers. Assuming this, a certain section of writers have been clamouring for some time past for a higher standard of scholarship amongst Naval officers; and as there is only one way by which this can be attained, by lengthening the educational course, the advocates of "high scientific attainments" seek to raise the age of entry.

Confining our remarks to the essays, it is worth noting the reasons assigned by their authors for the proposed change. The Gold Medallist advocates later entry chiefly on the score of expense. It seems there are numbers of young men about eighteen years old at the public schools who are absolutely yearning for a sea life, "were they but given a chance." There is nothing much the matter with the "Britannia" system, but because it costs £6,000 a year, everything is to be turned upside down in the hopes of getting a cheaper article than we do now—"it seems well worth a trial," says the essayist. Captain Eardley-Wilmot advocates a middle course, though he is greatly impressed with the necessity for raising the scholastic standard, and quotes the evidence of our naval attachés in support of his contention. The opinions of officers who have held the important post of attaché to a foreign Court are, of course, entitled to respect. The life is a pleasant one; they see many interesting State functions, and are even admitted to the dockyards and arsenals under certain restrictions, and, altogether, see a great deal of naval life *on shore*; but I have never yet heard of a naval attaché being permitted to accompany a foreign fleet to sea for a lengthy cruise, and thus it comes about that their opportunities of forming an opinion by personal observation of the practical abilities of foreign officers are of the slenderest, and the sweeping statements they occasionally indulge in must, therefore, be received with reserve. Still, from a scholastic point of view, their evidence is too strong to be disregarded, and on these and other grounds the essayist would raise the age of entry. Of the three essayists, Captain Rose, R.M.A., is the most thorough-going advocate of the scholastic test of naval efficiency. Some little knowledge of seamanship may be useful in after life, though he does not say so; and even professional skill is not to be despised, provided it is not too obtrusive, but for the salvation of a Naval officer it is before all things necessary that he "should be a cosmopolitan, an educated gentleman with considerable scientific acquirements." It seems that "the executive Naval officer has apparently laid himself open to the accusation of being the most illiterate officer in Europe," and to remedy this sad state of things the future aspirant for naval honours is to be kept under school and training till he is twenty, when, so the essayist tells us, "he will be still young enough to pick up a man-of-war's routine." It is distinctly comforting to know that by this time he has gained "his first glimpses of practical seamanship and navigation on board vessels especially attached to the dockyard," and, moreover, that "the youngster's training is complete." One could scarcely wish for a more complete *reductio ad absurdum* of the purely scholastic test of naval efficiency. The "secret of the sea," which our poor benighted and illiterate ancestors only thoroughly mastered after years of arduous service, under every conceivable condition of wind and weather, and climate, may now, it seems be "picked up," along with routine any time after twenty, when the youngster's training is "complete." It was never known till now how vastly superior we are to our ancestors, intellectually. Of course, young men who come to sea so thoroughly equipped for the battle of life are competent to hold any appointment, and are immediately available for promotion; so at least we are led to infer, for the essayist tells us that "to-day, as in the past, it is necessary that the commanding officer of a large ship or fleet should be a comparatively young man, for much nerve, enterprise, and endurance are required. Hence he should be early promoted to his position." In the old days we read of post-captains of twenty-one. Just conceive what a valuable public servant a post-captain of this age would be, under the new dispensation of things! The curious part of it all is that, after advocating a complete turning-upside-down of the present system, with a view to making the Naval officer "a cosmopolitan, and an educated gentleman with considerable scientific acquirements," the essayist calmly informs us that fitness for high command "depends generally so much more on character than on education." Perhaps, after all the essayist is only poking fun at us. Who knows? The fashionable cant of the hour is that, before all things it is essential to the salvation of a Naval officer that he should be

"scientific," and that he may be safely left to "pick up" professional knowledge any time after twenty, or thereabouts, the duties of a modern "seaman" being reducible nowadays to rule-o'-thumb, and the competitive examination test. To ensure a proper supply of the ideal Naval officer with "considerable scientific acquirements," the young man is to be kept at school till he is twenty, by which time the requisite article will be turned out complete. As a matter of fact, however, you can no more "make" young men scientific than you can make them all short and stout. You may stuff their brains with formulas, and problems so that they may pass the examiner's test, but this does not constitute a scientific officer, and, so far as concerns the majority of young men, the time and effort thus bestowed is absolutely wasted. The advocates of scientific training seem to imagine there is some occult virtue in the public school and college course on shore; there may be; but it is astonishing what a number of young men there are who, after years spent in the manner prescribed at prodigious expense, afford no evidence by their after life of having acquired anything but the knack of spending money which others earn; and it is difficult to conceive of such a training being specially adapted for youngsters who intend making the Navy their future career. Of course, if the nation, in its wisdom elects to have its Naval officers scholars and scientists first, and seamen afterwards, why, a long course of school and college life on shore is essential; but how, in the name of common sense, is the "officer" to acquire his sea training in time to permit of his promotion to the higher ranks before he becomes a confirmed valetudinarian? If there is one fact more than another which a connection of some thirty years with the Navy has impressed on my mind, it is that, to ensure the duties of the Navy in time of war being carried out with energy and enterprise, there must be a continuous flow of young officers into the higher ranks; and this impression has since been converted by a pretty extensive study of Naval history into absolute conviction. Naval officers are but human, and the characteristic of age is caution; it is natural that a man who has worked his way up to the higher ranks by years of arduous service should hesitate to stake everything on the result of a dangerous enterprise, the issue of which is absolutely uncertain, while disaster means ruination to himself. With youth it is different; the temperament is sanguine, and with visions of glory and fame rising before him no enterprise seems too desperate. A clever writer has reminded us that at one period of our history it was considered the greatest glory of an officer to bring his ship safe home again! It is time we cleared our minds of cant, and frankly recognised the fact that no examination test can produce the ideal Naval officer, and, moreover, that the vast majority of those who enter the Naval Service never can be "scientific" in the true sense of the word. A love of adventure, combined with the freedom and variety of a sea life, are, and ever must be, the attractions which draw the youth of our land into the Navy. And yet, strange as it may seem, from the time they join till the freshness of youth has been rubbed off, the authorities, in their extreme wisdom, do all they can to disgust youngsters with their chosen career by discouraging all enthusiasm for the sea, and torturing their minds into channels for which they have absolutely no real bent. Is it any wonder, under these circumstances, that so many become soured and disgusted with the life, and think, when too late, they have mistaken their career? How, in the name of reason, are we to keep up a healthy flow of young blood into the higher ranks of the Service if the officer does not begin his professional life till twenty? The comparative youthfulness of our officers, as compared with those in foreign Navies, confers on our Service an immeasurable superiority in time of war—the fact that, at a time when other Naval officers are only just beginning their sea career, our own have amassed considerable experience, and are, in many essential respects, competent sea officers, gives us an incalculable advantage which no amount of "scientific" knowledge can make up for. And yet, to satisfy the clamour of noisy pedants, we are invited to throw all these advantages to the winds, and to set off on a wild

goose chase after a sort of scholastic will-of-the-wisp, called "scientific acquirements"! It is a well-known fact that the mind endowed with a scholastic and scientific bent is the one which accommodates itself to the exigencies of a sea life with the least facility, and, if experience is any guide in this matter, it rarely adapts itself to the rough-and-tumble work of war. The Great Duke used to say his victories were won in the playing-fields—not, be it observed, the classrooms, of Eton. If Naval history carries any teaching with it, it is that the stamp of officer which comes to the front in war is not that which emerges with *éclat* from the examination-room. All this may seem shockingly old-fashioned and common-place, but it is common sense and the teaching of history; and it is folly to try and persuade ourselves that young men who only take to the water at twenty will be capable of working their way up to the higher ranks while they have youth and energy for great enterprises. There is no royal road to seamanship—I use the word in its modern and most comprehensive sense—the sea only renders up its secrets to those who woo it long and lovingly, and are on terms of the closest intimacy with it. Every day we have awful examples of the fallibility of human judgment; how men who have passed the best years of their life at sea make a slip, a slight error of judgment, which precipitates a noble ship with its human freight into the recesses of the all-devouring ocean. And yet, with these facts staring us in the face, and with the size and value of the machines entrusted to Naval officers increasing every year, there are fanatics amongst us who would persuade us that twenty is full early enough to begin to study the secrets of the sea; or, as Captain Rose, R.M.A., puts it, "it is no longer essential that his physical training should commence at an early age." Whatever may be affirmed to the contrary, the sea life is an unnatural life, from which a certain amount of hardship and discomfort is inseparable, all of which the boy of fifteen or sixteen accepts with good humour, if not absolute delight; while to the young man from the public school or college, with the comfortable accessories which now seem to be regarded as indispensable at these establishments, the novelty of these "unnatural" experiences soon wears off, and leaves a discontented mind which "can't see the use of" having to rough it. After all, is it true that Naval officers are the incompetent illiterates that some smart writers would have us believe? If we understand education to mean a mere parrot-knowledge of formulas and problems in mathematics, why then, doubtless, their education leaves much to be desired; but, if the word is accepted in its widest sense as comprising a knowledge of many subjects which never are, or can be, taught in the schools, Naval officers will be found to compare not unfavourably with the great mass of their fellow countrymen. In any case, to reproach Naval officers for not being accomplished "scholars" or "scientists," is just about as reasonable as to reproach lawyers for not being versed in engineering, or engineers for not being learned in the Roman law. The first and essential point to be considered in any system for the supply of Naval officers to the fleet is that it ensures at an early age the acquirement of what one of the essayists calls "mere professional skill." We should labour for utility rather than *éclat*. But to provide for all the shining accomplishments first, and to leave "mere professional skill" to be "picked up" any time after twenty, is to invert the natural order of things and to convert naval training into a school of pedants.