

CORRESPONDENCE

SIR,

The Value of Ship Availability

Commander Collis has written a thought provoking article on the value of ship availability (Vol. 18, No. 1), an article that makes one think of the true aims of defence forces in peace-time. It seems to me that the principal aim is to have a fleet in being, to demonstrate its capability of being used, and to use it when needed.

I don't see how a few extra days in harbour in peace-time when the ship is not needed affects this aim directly. Time in harbour of course reduces time in training at sea and has some effect on preparedness for war, but perhaps not very much effect. The aim is of course to be ready when needed.

From a maintenance point of view, it may be highly desirable to stay alongside the wall a day or two in time of peace to increase the readiness for war. So it is not reasonable to equate the cost of time alongside, even unscheduled time alongside, to some proportion of the value of the ship. Of course we can argue that availability in peace sets a pattern for availability in war, and there may be justification for this, but it is still not realistic to say that time alongside when the ship is not needed is a real cost.

The economist talks of 'opportunity costs' and says that the real cost of any action is the value of the opportunity foregone; what must be given up in order to achieve a given aim. If H.M.S. *Valiant* fails to catch the tide on a Friday and sails on the Monday instead, the cost of this is the cost of the opportunity foregone. What did we want to do with *Valiant* that weekend and what are the costs of not doing it or postponing it? That was the cost of missing the tide.

In Jevon's phrase, 'Bygones are forever bygones' and it is not good economics to consider the sunk costs of purchase in deciding how you should utilize an asset. But there is one way in which lack of availability represents a real cost. That is that in preparing for war one must buy and maintain additional ships in order to keep the number needed on task; and so lack of *war-time* availability represents a real peace-time cost by imposing a need for larger forces. I believe Commander Collis's cost approach is valid if related to availability in war, and it is quite appropriate as he says to weigh the relative merits of expenditure on more ships, or greater availability.

(Sgd.) W. J. ROURKE,
Captain, R.A.N.

SIR,

Chartered Engineers (Vol. 17, No. 1)

I wish I had read the article 'Chartered Engineers' by Admiral Aylen two years ago when it was first published. Unfortunately Vol. 17, No. 1 and I missed each other somewhere.

My own experience with regard to entry into one of the Institutions does not tie in with Admiral Aylen's statements. I have been refused Corporate membership of the Institute of Electrical Engineers on the grounds of examinations passed and responsible experience. So far as responsible experience is concerned, I have no quibble—this should come with time. However, in the examination field, I have been told that I must pass one of the C.E.I. Part II papers (to be precise, Electromagnetic Fields and Circuits). My application was acknowledged by the I.E.E. on 13th February, 1967, and the letter of refusal was dated 16th January, 1968.

My Service history is basically that I served a Royal Navy Apprenticeship, commencing in 1933, became an Upper Yardman (L) in 1960, completing various courses and seetime, and then completed the Long Electrical Course at H.M.S. *Collingwood* in 1963.

Since that time, I have served as the Air Engineer of a flight of naval aircraft, as Course Officer at a training establishment and I am now on two years' exchange service with the Canadian Armed Forces as an Electrical Project Officer.

There were several other members of the Long Electrical Course with similar histories to mine and I would presume that their experience with regard to membership of the I.E.E. was, or will be, the same.

I am about to commence 'swotting' for the examination in May and I will certainly be annoyed if I have wasted needlessly a considerable amount of time, energy and money.

Has anyone else had similar experience and managed to circumvent the C.E.I., Part II?

A copy of this letter has been sent to the Council of Engineering Institutions.

(Sgd.) D. A. PELLING,
Lieutenant E (L)(AE), R.N.

Reply from the Institution of Electrical Engineers

SIR,

Part of the misunderstanding in the case of Lieutenant Pelling arises from Admiral Aylen's attempt at too sweeping a generalization in his article which was published in Vol. 17, No. 1 of the *Journal*. The Institution of Electrical Engineers raised the standard of its qualifying examination to that of the ordinary degree in 1957 although continuing to give retrospective recognition to qualifications obtained prior to the date until 31st December, 1966, when this dispensation was withdrawn.

It should be remembered that the advice of this Institution was sought by the Admiralty during the discussions which led to the introduction of the Naval Electrical Branch and the Admiralty accepted that ex-cadet officers of the Naval Electrical Branch would be educated to degree level and, incidentally, receive training in industry for periods making up a total of two years. Much has changed since then but the Institution has continued to assess the educational attainment of naval officers against the standard it would expect from civilian candidates.

I am delighted to read that Lieutenant Pelling intends to take the one examination he has been asked to sit as a test of his academic standing and if he is successful, as I sincerely hope he will be, he will have every reason to be proud that he has met and beaten this challenge.

May I, however, endorse Admiral Aylen's plea for more qualified naval engineering officers to join their appropriate professional institutions early. The dates he quotes in his last paragraph are certainly important but, as a general philosophy, when changes in standards are introduced there is usually

some dispensation afforded to those who are already non-corporate members whereas non-members get little or no consideration.

May I just add that the delay in dealing with Lieutenant Pelling's application was partly due to extreme staff difficulties over a period of many months in 1966/67 which resulted in a large backlog in the handling of applications. It was also partly due to the concern of the Institution to be fair to him which resulted in his case being specially considered, together with two other similar cases, by the Examinations Committee at successive meetings in the late summer of 1967 before being considered by the Membership Committee leading to the final decision on the Council of the Institution at their meeting on 5th January, 1968.

(Sgd.) J. S. RAVEN.

Registrar, Institution of Electrical Engineers.

SIR,

Principles and Methods of Obscurantism

'A Daniel came to judgement' (to borrow a phrase) 'Yea a very Daniel'.

Doctor Kohn's article in Volume 18, No. 2 of the *Journal of Naval Engineering* is bang on the mark. How one longs for another Churchill to re-issue Sir Winston's war-time edict insisting upon plain words!

I have only just recently received from a very well known Anglo-American firm, and written by a very pleasant young man of excellent academic background, a document that sets out on 15 sides of (U.S.) foolscap the need for matching the time constants in two inter-related servo elements. It is so wrapped in symbols, equations and formulae that I for one have no strength of will even to read it. Neither is that necessary, because within five minutes of the effect of a mis-match appearing in a recent sea trial, the cure, worked out by simple arithmetic by the draughtsman who happened to be witnessing the trial, was already being implemented as a self-evident adjustment that needed not even second thoughts to validate.

It horrifies me that we are being so blinded with science. Americans, once known as blunt, forthright rationalists, are if anything the worst offenders. The obscurantism you assail, succeeds because few of us dare admit that we can't understand it. The one really great advantage of the old way of running the Admiralty was that a senior officer—a Captain or Admiral—headed each (small) department. He had no need to vindicate his own standing. He would without doubt have sent for anyone who dared obscure his meaning and then and there demand a full explanation in 'one word or less'.

I recall an electrical-cum-radar friend of mine (then a Commander) saying to me, 'I've been told by the Admiral to explain Radio Doppler in 250 words that even he can understand'. (It was 21 years ago when this was new to most people.) All I could think of to help him was to suggest that he put it in terms of the Admiral's own pet interest. 'How the Hell can I do that?' asked my friend, 'It's women'. This seemed to me to present no problem at all; in fact, it provided the most elegantly simple solution of all. So I wrote out the story of Solomon and Sheba, but added a little embroidery of my own, i.e., that Solomon being all-wise and wishing to keep tabs day by day on Sheba's progress across Africa to visit him and without letting her know his ardent feelings (he was a wise man), sent her by hand of slaves, each day at noon, one golden pomegranate. The slave would then return and, depending upon the difference in frequency of the return of the daily slaves, Solomon would know exactly how fast Sheba was travelling, when she paused, and when she re-started her journey. Even when the Queen discovered that by travelling faster, more golden gifts arrive per day, and so whipped her camels to such haste that Solomon's royal abacus

ran hot. His calculations, however, remained unimpaired in accuracy, so that just as Sheba's camel train burst into Solomon's palace, sure that such speed would have caught the King by surprise, there was the King and his Court, and the bath of asses' milk, all ready and the braised peacocks just being carved upon the tables. She was astonished when the High Priest uttered four strange words ('Bang on her E.T.A.') but didn't see him close the confidential report of the Royal Seer that was headed 'Prophetic Study of Type 900', nor hear the King surreptitiously turn to his Chief Eunuch and say, 'Same again but with asps for the Queen's mother'.

Just to be sure that the Admiral would understand this, I tried it out on my mother, then 74. She hoisted it in completely, right away.

I claim no merit for this, but I do claim that if everyone thought before writing anything:

- (a) Can the recipient read my writing?
- (b) Can I make it any simpler?
- (c) Can I couch it in his most favoured terms, using his preferred subject as a basis?

Then the world would suffer less from misunderstandings and from the all-too-familiar story of great inventions that lay buried for generations before being understood—or even studied.

(Sgd.) A. ELPHICK,
Mechanical Engineer, R.N.E.S.

Part of the Author's reply to Mr. Elphick:

'I read with delight your explanation of Doppler's effect using the story of Solomon and Sheba . . . It is quite gratifying to an Israeli to have his ancient King serving such an excellent example for the demonstration of some physical principles!'

(Sgd.) ALEXANDER KOHN,
Israel Institute of Biological Research.

