THE NAVAL REVIEW

TO PROMOTE THE ADVANCEMENT AND SPREADING WITHIN THE SERVICE OF KNOWLEDGE RELEVANT TO THE HIGHER ASPECTS OF THE NAVAL PROFESSION.

Founded in October, 1912, by the following officers, who had formed a Naval Society:

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Admiral W. H. Henderson (Honorary Editor)

> It is only by the possession of a trained and developed mind that the fullest capacity can, as a rule, be obtained. There are, of course, exceptional individuals with rare natural gifts which make up for deficiencies. But such gifts are indeed rare. We are coming more and more to recognise that the best specialist can be produced only after a long training in general learning. The grasp of principle which makes detail easy can only come when innate capacity has been evoked and moulded by high training.
>
> Lord Haldane

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Editorial

Annual General Meeting

Through the courtesy of the Commodore, the 1999 Annual General Meeting was held at BRNC Dartmouth on Friday 25 June. Attendance was on a level with, perhaps a little higher than, previous years and any special effort made by non-Westcountrypersons was well repaid by the warm welcome from BRNC staff and the opportunity to see the marked and positive effects of the new training pattern.

The meeting itself highlighted the continuing general good health of the *NR*, with membership still buoyant and the standard of contributions high. A fuller account of the discussion on content will appear in the October issue; deadlines did not allow its inclusion here. As to finances, they were holding their own at present, but in the nature of things would decline, and it would be necessary to increase the subscription to £20 annually (£10 for Sub-Lieutenants and below) from 1 January 2001.

Tributes were paid to our outgoing Chairman Admiral Sir James Eberle, and a warm welcome extended *in* (unavoidable) *absentia* to his successor, Admiral of the Fleet Sir Julian Oswald.

This issue

It looks at the time of writing as though we shall be a few pages light, but that does not reflect either a shortage of contributions – some longer historical pieces are deferred traditionally to October – or a lack of *gravitas* or stimulating reading. In the latter category (they are not mutually exclusive of course) I would in particular put the pieces by Alston, Garstin and Foster. If you can bend your mind round that lot in quick time, you are in a fair way to joining our new Chairman as a member of Mensa.

The US Naval War College Review

It is good to be able to say that we have renewed our reciprocal arrangement with this excellent quarterly publication. If any member wishes to offer his services as a reviewer in the Reviews–I section, I shall be glad to send copies soon after they have come in – and I have had a chance to read them.

Antipodean publications

The same goes for the *Journal* of the Australian Naval Institute, the *New Zealand Defence Quarterly* and (NZ) *Navy*. I commend all these as good reading – though they may not be as forthright as our regular correspondents from down under – and should be grateful for volunteers to review.

The Maritime Volunteer Service

This now has over 50 units around the country, a real success story. It has moved into a new field, or new waters perhaps, in acquiring expertise in oil spill response and control, and recently took part in a Marine and Coastguard Agency exercise in that role.

The Flagmakers

The activities of this organisation deserve a mention, particularly as part of it operates from the flag loft at Chatham. They have just produced – along with flags – a most interesting print of a French code flag chart of 1804. Enquiries to United Flag Traders Ltd, 19/20/22 Clarion Court, Llansamlet, Swansea SA6 8RF, tel. 01792 700795.

The *Naval Review* Debate

A report on the debate, held on 14 July, will be in the October issue.

RICHARD HILL

HM King George VI

WHEN in 1936, the bombshell of his brother's Abdication from the Throne burst on the then Duke of York, his initial reaction, as cited in his official biography, was to the effect of:

> '. . . But I can't take on those responsibilities, I am only trained as a Naval Officer.'

While it is true that after his formative school days at the RN College, Dartmouth, he served at sea in the First War, as a midshipman appointed to the battleship *Collingwood*, taking part in the Battle of Jutland; and, much to his Captain's consternation (charged with the safety of the King's second son) Midshipman Albert George jumped onto the top of his gun turret, so better to watch and spot the fall-of-shot at the height of the battle. It is also true that during the post-war period, he enhanced his reputation as a modest and retiring, albeit Royal figure, quietly undertaking tasks related to 'Management Development', as the quotation below demonstrates only too well.

In 1952, when King George VI died, universally esteemed as an honoured monarch, who with Winston Churchill had exhausted himself physically in guiding this country to a comprehensive victory over its enemies – enemies against whom Britain and her Sovereign stood alone and unaided in May 1940 – his full dress uniform was presented by his widow to his old School at Dartmouth.

This summer, on 27 July 1999, some of the King's erstwhile contemporaries in the Royal Navy from the Second War of '39-'45, but now long retired, Naval Officers, wishing to emulate her gesture and honour their Admiral of the Fleet instigated a new memorial at Dartmouth, underlining for future generations of serving officers the late King's sterling qualities. A bust of him in full uniform, surmounting a plaque engraved with his words, opposite, is being commissioned for installation at the College at the dawn of the new century.

As this gesture has become more widely known, both serving and other retired officers have enquired whether it would be possible and appropriate for a wider sponsorship and subscription to this Memorial to grow. Accordingly, the sponsoring Committee have agreed that support from any commissioned officer, active or retired and who holds the long-term good of the service as something near and dear to him, should participate if they are so minded.

ARNO Council have consented to the establishment of a discrete Fund to administer donations of this nature, of any amount, arising from officers qualified as above in the Royal Navy and Royal Marines who have come through Dartmouth, irrespective of professional specialisation or current status.

The ARNO office address is 70 Porchester Terrace, Bayswater, London W2 3TP and cheques should be drawn in favour of ARNO crossed 'KG VI, Memorial Fund'. The fund will remain open throughout 1999 and 2000.

Re-reading the final sentiment in his speech quoted below, it may well be held that King George VI did indeed

> '. . . help to pave the way'.

J.H. GOLDS
LIEUT. CDR, RN

HM King George VI – on Leadership

Speaking as a concerned young Naval officer, in the aftermath of the Invergordon mutiny, some six years before his unexpected and, as then, unanticipated accession to the throne, he said:-

> 'To my mind he must possess three great qualities: personality, sympathy, and above all idealism . . . I do not think I need speak to you about personality . . . of sympathy I will say just this, its keynote is personal contact and understanding . . . The third quality of the leader is idealism.
>
> Nobody can lead unless he has the gift of vision and the desire in his soul to leave things in the world a little better than he found them. He will strive for something which may appear unattainable, but which he believes in his heart can one day be reached, if not by him, by his successors, if he can help to pave the way.'
>
> *[Speech at Croydon, delivered ca: 1930]*

The Limitations of the Joint Approach

based on a paper delivered to a conference on Joint and Combined Operations: The Role of Maritime Forces in Peace and War at Lancaster University, 25-26 March 1999

THE focus of current western maritime doctrines is the role that flexible, mobile and autonomous maritime forces have to play in multi-service and, to a lesser extent, multi-national operations. With western, essentially though not exclusively American, maritime dominance apparently unchallenged on the high seas, our navies' focus has shifted from operations *at* sea to operations *from* the sea, that is against the land. Greater naval interaction with the land-based services – ground and air – flows naturally from this. Additionally, post-Cold War force reductions of a scale greater than any reduction in operational commitments, also provide a powerful imperative for our Armed Forces to maximise their operational capabilities, by drawing on each other's resources and expertise.

We should not overlook, however, the limitations of the Joint and Combined approach at sea. There remain significant tasks for navies in which the involvement of the other Services, and of other nations, are necessarily limited or even absent. Nor should we neglect the limitations imposed on maritime forces in contributing to operations conducted by land-based forces. This is true in peace and war, but especially in peace, or at least in conditions of dispute and conflict short of 'high intensity' shooting war. To that extent, a cautionary note in our current enthusiasm, much of it nonetheless well-placed, for multi-national jointness may be appropriate. The constraints imposed on maritime operations within a joint framework are both operational and institutional.

A key feature of most applications of military force in the post-Cold War world is Limitation. That limitation may be of ends or means, and most likely both, as the political purpose of military operations *should* keep each in tune with the other. Maritime operations undertaken for limited purposes, and employing limited means, often retain distinctive naval characteristics in which the scope for 'combinedness' may be much greater than that for 'jointness'.

Conveniently for navies, most operations in which western forces are likely to be involved are in the 'littorals', the coastal regions of the world that contain the majority of human populations and political and economic centres. The commonly accepted definition of the littorals is:

> *Seaward*: The area from the open ocean to the shore which must be controlled to support operations ashore;
>
> *Landward*: The area inland from shore that can be supported and defended directly from the sea

The landward focus of both parts of this definition is noteworthy, and in accord with the power projection, *'from the sea'* focus of maritime doctrine. The United States Navy defines the future role of its surface fleet in terms of the twin missions of Land Attack and Theatre Air Defence – both inherently land-oriented, joint tasks. The RN lacks both the capability and operational doctrine to be quite so assertive, but the emphasis on the three core power projection capabilities – carriers, SSNs and amphibiosity – demonstrate a similar trend exemplified by the related operational concepts of Maritime Manoeuvre and the Maritime Contribution to Joint Operations.

However, we should not overlook that what are littoral waters to us, are to local states coastal waters, of increasing economic, political and military importance. While we may focus our attention landward from these waters, other states gaze out to sea from ashore. Significant and increasingly sophisticated military capabilities are projected *'from the land'* out to sea. Western maritime dominance, assured for the time being at least on the high seas, is a good deal less assured as our naval forces approach the coastal margins of regional powers, in the face of land-based sea denial capabilities. These littoral waters are, of course, precisely where western navies need to be in order to exercise power and influence ashore.

Sea control therefore remains an essential

maritime mission, even if the disputed battlespace has shifted from the open sea to shallower, more confined, more congested and more complex coastal environments. Future events may demonstrate that the United States in particular has not devoted sufficient attention to achieving local sea control in the littoral, in order to project its increasingly land-oriented maritime power ashore. Moreover, local sea control is more likely to be undertaken prior to, rather than after, the establishment of land control ashore. In the absence of shore bases within reach, the ability of land-based forces to contribute to a joint operation at sea is necessarily limited or entirely absent. Even where such bases do exist, their static nature and the political constraint inherent in operating from another states' territory may limit their effectiveness. And while sea-based forces are increasing their landward focus, our land-based forces, if not those of potential opponents, are *reducing* their *seaward* focus – for example, the withdrawal of Tornado aircraft from the anti-shipping role.

The need to achieve local, littoral sea control is not confined to the requirement to secure a maritime operating base adjacent to shore. Intervention and influence ashore is, rightly, our main focus, as Sir Julian Corbett pointed out to the RN War College at the beginning of this century. It is worth making an important distinction here between intervention and influence, however much one may appear to imply the other. The impact on shore of maritime power may be direct or indirect. That is, interventionary force may be projected directly ashore, as in for example an amphibious landing, or air strikes against targets on shore. Alternatively, operations conducted entirely at sea may still have a profound influence over events on land. The Second World War Pacific and Atlantic campaigns respectively provide good examples of each. The continuing, some might argue the increasing, importance of the sea in human affairs, especially its economic and environmental importance, dictates that maritime operations are not only about the projection of power ashore. This is so even in the littorals. Recent as well as more distant history provides many examples of maritime operations conducted in littoral regions that stop short of direct intervention ashore. ARMILLA and SHARP GUARD are but two such examples. Even convoy escort, that apparently most blue-water of naval tasks, is actually just as much a coastal as an open ocean mission. Distinctively naval missions will remain, even in the littorals, and must not be overlooked in a desire to be, above all, Joint.

We hear much, both from the US and here in Britain, of 'Battlespace Dominance' and 'shaping operations'. Within the context of high-tempo, high-intensity operations of relatively short duration, the exploitation of qualitative advantages, especially in the fields of information, stealth, precision and firepower, has obvious appeal. But in our desire to employ superior technology, training and doctrine to offset our disadvantages in time and space in regions far distant from home states, we must recognise that, at least as often as not, political purposes are limited and so are the means employed to achieve them. Many operations conducted adjacent to a hostile or potentially hostile coast will not entail direct intervention against that shore, even where significant potential threats to western forces originate on land. This may continue to be the case even where shooting has taken place; for example the USN's clashes with the Libyan and Iranian navies in the 1980s. Land forces, whether delivered by air or sea, have little or no role to play in these kinds of scenarios, and so the scope for 'jointness' itself remains limited.

The range of 'non-interventionary' naval missions, in the littorals and further out to sea, is a wide one. Many of them come under the broad description of sea control – the protection of merchant shipping (from state and non-state threats), blockade, sanctions and embargo operations, mine clearance, freedom of navigation enforcement. Precursor operations to establish local sea control will often be required prior to an active intervention ashore later in the campaign. Readers of the *NR* will need little reminding of the continuing relevance of Gunboat Diplomacy, limited naval operations that can

be used to influence friends and foes alike, in benign and hostile environments. Warships' ability to 'poise' offshore brings a potent latency that can be exploited in numerous ways, a characteristic not shared by Joint partners ashore. Finally, the growth of naval Peace Support Operations (PSOs) adds an extra dimension to many long-standing naval tasks and capabilities.

When the main focus of operations *is* on land, maritime forces may play a significant role, especially early on before land-based forces can be established. Most equipment can only arrive by sea, and where suitable, friendly facilities do not exist, entry for any forces will have to be from the sea. However, maritime forces' superior mobility – strategic, operational and tactical – is nonetheless confined to the sea. The further inland is the object of any campaign, the less maritime forces can contribute. This may seen self-evident, but it is worth re-stating especially as the USN's technological and doctrinal investment in operations on and over the land is much greater than Britain's. This disparity is partly a matter of scale and resources, but also one of choice in operational doctrines and procurement policies. This is especially so in air defence. While Britain has in the past led the way in joint sea-land air defence, the RN's new air defence ships are as focused on purely naval anti-air warfare requirements as their predecessors. In contrast, the USN, for the first time, is addressing the defence of forces and allies ashore against all forms of air threat including ballistic missiles.

A further word of caution on the merits of jointery is appropriate. The only inherent Joint issue or problem to be resolved is that between forces which operate from the land and from the sea, as they intrude into or over each others' environments. All others are the consequences of particular institutional arrangements that create a joint 'problem' where conceptually at least, none need exist. By this is meant the allocation of tasks and assets between the Services, especially where land-based forces (inevitably more numerous than sea-based, as we are, after all, land animals) are divided into more than one service – an army and a (land-based) air force.

In Britain, the forces pride themselves on an ability to work jointly at the tactical and operational levels rather better than most. This may be in part because they *have* to, given who does what. In most countries, for example, the army owns its own support helicopters and the navy its own maritime patrol aircraft. In Britain, where both are operated by the RAF, the forces have long had to address the Joint issue in areas where others have not needed to. Ironically, some, though not all, of the new joint institutional structures announced in the SDR serve to exacerbate that feature of Britain's defences. The new Joint Helicopter Command (an RAF wheeze to finally secure control of all helicopters that back-fired) actually serves to confirm the distribution of battlefield helicopters amongst all three services. In doing so, it tends to divorce those elements from the remainder of their respective services, potentially creating *intra*-service difficulties. A similar story is true of Joint Force 2000 (what will we call it in 2001 or 2010?), the joint RN/RAF Harrier force. The RN's Sea Harriers may have increasingly more in common with a part of the air force than with the rest of the Fleet Air Aim. When the new carriers arrive with the Future Carrier Borne Aircraft (FCBA) – probably a variant of the Joint Strike Fighter (JSF), each carrier air wing will have one navy and one air force squadron, employing identical aircraft operating from the same afloat and shore bases. Very 'Joint', but why does it need to be joint at all? The answer, of course, is that these structures address institutional imperatives as much as, perhaps more than, operational needs.

The main thrust of the argument here is the limitations imposed on the joint aspect of maritime operations. The scope for combined, that is multi-national, operations is usually greater. NATO navies in general have a good deal more experience in working with each other than they do with their respective national sister services. What one navy can do on its own, two or more could well do better together. This is not always the case, however. Differing capabilities and approaches can be contradictory as well as complementary. This is especially so where non-traditional allies

are concerned, with whom co-operation may have a political rather than operational imperative. Concern is often expressed about the acquisition by the USN of 'information-age' technologies, to a greater extent than any other navy can afford, so denying others the ability to work effectively with them. In fact, the increasing adoption of commercially-derived systems and protocols should make interoperability without interchangeability easier, not more difficult. It is rather in the realm of doctrine, in all its facets, that difficulties lie. As long as states retain distinctive cultures and interests, these problems are not going to dissipate.

That a greatly increased stress on Joint operations is both right and inevitable is not in dispute. We should be mindful, however, of the limitations, operational and institutional, in the application of maritime power in a Joint context. There are limitations to what maritime forces can and should do. Equally, there remain important things for maritime forces to do which by their nature are not particularly Joint.

J. R. STOCKER
LIEUT. CDR, RNR

Members' Addresses

IN early March, the Managing Director of the Capital Label Company, who keep our mailing list, and provide the addressed envelopes in which *The Naval Review* comes to you, suffered a brain haemorrhage, and has been incapacitated (though he is making a slow recovery). He was not only MD, but was very much the initiator of all works. He was in the middle of transferring our address list to a new system, which was password-ed for security – and unfortunately, those passwords are locked in his brain, and are irrecoverable.

Fortunately, another company has been able to 'pick up the ball and run with it', but their take-on has started from a somewhat doubtful base. The latest information suggests that up to 140 members may not have received their April 1999 issue. Action has now been taken to send copies to all those thought to have been missed; anyone who reads this note, and has still not received an April issue, is invited to get in touch with the Secretary-Treasurer.

Finally, to help sort out the situation, could all members please check their envelopes – either now or, having been forewarned, in October – and let the Secretary-Treasurer know of any errors, however slight, in the address?

A. J. W. WILSON

Missile Defence: The Naval Implications

This lecture was given in the plenary session of the IMDEX conference on Maritime Security in the Asia–Pacific area held in Singapore this May. Professor Brown was the Academic consultant to the MOD's Pre-Feasibility Study on Ballistic Missile Defence, 1994-7.

AN irksome problem with missile defence is deciding how singular it is. The historically-minded might turn to the English tune for which the American representative, Francis Scott Key wrote an inspirational lyric when, detained aboard a British warship, he dourly watched us bombard Fort McHenry near Baltimore in 1814. His depiction in the *Star-Spangled Banner* of how 'the rockets' red glare, the bombs bursting in air, gave proof through the night that our flag was still there', could persuade one that conceptually the threat is not that novel. The ballistic rocket has been seen, until recently, as the form of missile to be especially concerned with. Then again, bombs bursting in air are precursors of multiple warheads.

There are, none the less, very fundamental differences. In *On War*, Clausewitz took as axiomatic that we do not fire from one continent to another. Today that sounds quaint. Likewise the interception of ordnance in flight began with the campaign against V-1 cruise missiles, 1944-5. Quite the grimmest aspect of novelty, however, is the biological warload.

This presentation does not attempt to explore every nuance of missile defence at sea or wherever. It seeks merely to identify the salient issues. The view in the Ballistic Missile Defense Organisation in the Pentagon is that one needs to look 25 years ahead. That is here accepted.

The Strategic Defense Initiative

I came to this subject in the heady years following President Reagan's 'Star Wars' announcement of March 1983. Interest was running high, not least among the young. In 1985 I lectured at the Clarendon Laboratory. Expecting to attract an audience of about 20, I found myself facing one of 300. Today I would be lucky to get the 20.

But public apathy, if that it be, gives us a breathing space. Above all, it gives us a chance to break out of the gridlock of being unconditionally either for active missile defence or against it. Trite polarisation stultified the debate through the middle 'eighties about the Strategic Defense Initiative. It could be even more cramping now, given the diversity of perceived threats and responses. To an extent, this perception is a function of the more regular inclusion in the reckoning of the cruise missile as an alternative to or complement of the ballistic. Also in train is the emergence of hybrid varieties. One genre can be that in which the power for most of the flight path comes from a ram jet or turbine but a booster rocket is fired to accelerate a terminal dive. That could pose quite a serious problem *vis-à-vis* the defence of ships at sea.

Benign SDIO

So let me, as an erstwhile rather absolute critic of SDI, contribute to the breaking down of polarisation by recalling two particular episodes from those days – the one globally decisive and the other merely personal but in its way indicative. The former concerns the contribution SDI made to the USSR's conceding defeat in the Cold War as opposed to making a last frantic bid for victory.

By 1986 Raymond Garthoff had concluded, as the senior Brookings analyst of Soviet military affairs, that Moscow viewed SDI as a fount of technological spin-offs all across the panoply of war.[1] Meanwhile, Westerners in contact with Gorbachev at the Reykjavik summit and elsewhere saw indications that SDI had persuaded the Soviet leaders the Cold War was in no way winnable.[2] Even as a vision, it said too much about America's virtuosity and zeal. This was confirmed at Oxford in 1992 by Roald Sagdeev who, through the middle 'eighties, had headed the Institute for Space Research at the Soviet Academy of Sciences.[3] Putting the case, he came over as reasonable and trustworthy.

The personal anecdote is this. The Strategic Defense Initiative Organisation, the antecedent of BMDO, was distrusted by

American liberals. It was seen, at best, as a front for the 'high tech Gulags', groups of scientists in secluded National Laboratories working with too purblind a resolve. All the same, General Abrahamson (as the first Director) preserved within the Washington organisation an open debate on many issues. In 1988, I requested that SDIO read through in draft a chapter which reviewed the SDI technologies. The SDIO people knew full well this study would oppose the weaponisation of Space, something they themselves still saw as centrally important. Nevertheless O'Dean Judd as Chief Scientist and Dick Gullickson, his deputy did a thorough perusal of this script – much enhancing the quality of a text that, in narrow terms, could do little for their aims.

The political guidelines

As the debate moves forward, it is important to build consensus both within individual countries and throughout the global matrix of alliances and less formal ties. A precondition surely is acceptance that few countries will increase their defence budgets simply to embrace missile defence. Something else to accept is that arms control in some form should continue in this field. It is part of the matrix of an emergent world order intended to deal with a mélange of transnational problems – ethnic cleansing, terrorism, syndicated crime, drugs, pollution, climate change, debris in Space. . .

Yet this is not to celebrate the Anti-Ballistic Missile treaty signed by the USA and the USSR in 1972 as a sound basis on which to proceed. There is discordance in spirit and substance between its text and what has really been going on. Thus the preamble states a prime aim was to curb the strategic arms race. However, technical dexterity and geopolitical upheaval have since blurred the difference between 'strategic' and 'tactical'. Even the neat distinction between 'anti-missile' and 'anti-aircraft' has been fading. The rub is that the 1972 text deals with a category of weapons that has since lost its singularity. You might as well design an arms pact around the battle cruiser.

Nowhere have the contradictions been more obvious than in negotiations between Washington and Moscow to exempt Theatre Missile Defense from the 1972 prohibitions on the basis of the speeds allowable for (a) an interceptor missile and (b) its target Re-Entry Vehicle. All else apart, a longer-range ballistic missile does have to be fast but a shorter-range one does not have to be slow. So accepting that the requisite diplomacy will have to be carefully timed and judged, the ABM treaty ought to be superseded by a multinational accord that draws the line against the positioning in Space of actual ordnance as opposed to tracking facilities.

One thing a non-weaponisation of Space pact would draw a line under is a disposition, evident since Sputnik, to treat Space as a new dimension in war alongside land, sea and air. There is here sequential logic. Theorists of air power have been gradually discarding the notion of control of the sky in any overarching sense. They are recognising instead a seamless web of military power extending from the Earth's surface to near Space. They are, in other words, coming round to the view expressed in 1916 by F. W. Lanchester, a brilliant aeronautical engineer but also a great writer on doctrine: 'The command of the air can never be taken to carry a meaning so wide or far-reaching, or in any sense as comprehensive, as that understood when we speak of command of the sea'.[4]

None the less, the elevated positioning of surveillance and firing points is important, not least for dealing with the most serious threat we may face at theatre level – the sophisticated cruise missile that jinks and hugs the surface. That threat should be less acute against a naval task force under way at good speed well distant from its adversaries. Low-level engagement is, in any case, easier over a flattish expanse of water. That does not mean elevation can be discounted. But neither must that mean weapons location in Space.

The operational parameters

Arguably, the distinction between open ocean and inshore is for navies of more import than the one between theatre and strategic missile defence. However, there are two caveats to enter, both concerning ballistic flight. To cover a horizontal distance of 500 km, say, a

ballistic missile on a 'minimum energy' trajectory would rise to an apogee (ie maximum height) of 125 km, well above the defined upper limit of the atmosphere. A 100 km is taken as the altitude up to which atmospheric resistance has tangible significance whether in regard to a warhead re-entering, a missile homing, a satellite orbiting or a meteor burning out. In short, it is the divide between 'endo' and 'exo'. During the 1960s, the great majority of governments came to accept this as also the legal boundary between national air space and Outer Space.

When the free ballistic flight of a warhead capsule is 1,000 km or more, considerable mechanical and thermal stress is imposed by retardation on re-entry. The design of a Re-entry Vehicle (RV) and the materials it incorporates have therefore to be of superior quality. In any case, miniaturisation may be constrained. The shrouding of any homing sensors could also be a problem.

The other high-altitude problem concerns what happens to the spillage from warheads of mass destruction after interception. Take the biologicals. The view at Porton Down has lately been that germs would be hard put to survive the cold and, above all, the aridity of the upper atmosphere. In addition, the fierce radiation encountered above the ozone layer might decompose biological agents. Yet it may not be efficacious against every substance, least of all spores genetically engineered for hardiness.

So novel dilemmas will be posed about (a) when BMD batteries might open fire and (b) down to what altitude interception would be allowable on a given occasion. The difficulties will be compounded by short warning times: never more than 30 minutes and often well under five. Also by the impossibility of predicting with precision the spread of lethal clouds – biological, chemical or radioactive.

These dilemmas primarily concern overall command. But there is also the question of tactical control in theatre or local war. From the very start of SDI, all sides have allowed that Ballistic Missile Defence (BMD) could never be 100 per cent successful in the face of a massive attack nor proffer a 100 per cent guarantee against a small one. A standard explanation has been that battle management would not be foolproof. This tenet has embraced everything from software errors, either syntactical or logical, to human frailty or sheer inexperience and ill-luck. But the nub has been that the architecture could never match perfectly requirements on the day. Too many permutations are too critical. For a fleet at sea, 'architecture' is considerably about the vessels that apply a Co-operative Engagement Capability, always bearing in mind that the fleet configuration and disposition must also be adapted to other tasks, not least air defence.

The more general inference is that battle management could have a major impact on interception rates. Along with other factors, it could make these rates as variable as those for manned aircraft have historically been. F. W. Lanchester's Square Law about the numbers game is relevant as always. So, too, will be how thickly the defensive assets are spread across the sea and/or land area to be covered. No less important will be the variables inherent in geodesy, geophysics, systems engineering, etc. But most critical within that context will be the technological prowess of the contenders.

Technological advantage

There is no more difficult field in which to predict far ahead. Through the Cold War, we would have been better off if we had regularly taken the opposite view from the expert one on the shifts in comparative advantage of the West and the Soviets.[5] Now the situation is complicated by two new enigmas. The one is a global information explosion unprecedented by orders of magnitude. The other is the future attitude towards the West of Russia and of China. To what extent might they act, separately or together, against the West? The answer will reside mainly in China.

Two general points can be made. Already Less Developed Countries (LDC) have found the development of nuclear warheads a sight easier than that of advance means of delivery. Furthermore, biological bombs could be far easier for any LDC to make than nuclear.

As regards delivery, the Missile Technology Control Regime (to which over 30 nations already subscribe, formally or

informally) seeks to block the transfer of key components. Some commentators suggest this has been harder to do for items that relate to cruise systems. Overall it is fair to say that primitive cruise missiles (eg adapted light aircraft) are easier to fabricate than their ballistic counterparts but that sophisticated ones are harder.

A technology liable to proliferate markedly this next quarter of a century is the 'smart submunition': the warhead capsule that separates into one or two dozen bomblets, say, each able to home individually on a target like a tank – this by using the matching image technique known as 'sensor fusing'. In January 1993, I received a letter from Richard Garwin, the IBM Research Fellow who has throughout assumed a high profile in the American BMD debate, this from a liberal standpoint. In this letter, he did express some optimism about the interception from the ground of a descending unitary warhead. But he immediately qualified that by admitting the near impossibility of intercepting thus 'forty' bomblets dispersed from each rocket during its ascent. In this particular, he aligned himself with Henry Cooper, the last Director of SDIO and now active on the Right of the debate. This fortuitous concordance has great authority. It is further augmented by the progress already made in various countries (including Russia) with smart submunitions for use in artillery, mortars and tactical aircraft.[6]

What should also be recognised is that the warloads borne on ballistic missiles do not have to be mass destruction, not even for strikes across extended ranges against hard-point targets. It is a truism that, apropos strategic doctrine, has been too long discounted. In 1987, the USAF was reportedly at a 'critical point' in the development of high-explosive warheads for installation in Minuteman 3 ICBMs modified to home on emissions from master radars. Since when, the USN has tested a Trident D5 Submarine-Launched Ballistic Missile with a non-nuclear precision warhead incorporating metal rods able to penetrate 20 feet of concrete. The word has further been that a D5 might be guided onto target by GPS satellites.

The moral is that the long-range ballistic missile may register an accuracy as good as that of its cruise counterpart. Yet the former is not saddled with the two incubi the latter face when used so strategically – inordinate fuel loads and taboos against overflying neutral territory. Given the geopolitics of today, we are unlikely to be talking intercontinentally about the next 25 years. But beyond that, it could be yet another manifestation of a shrinking world.

Turning specifically to BMD, one addresses an option liable to remain a narrow preserve except at very local level. Intercontinentally, one is concerned as regards development just with the USA, perhaps acting in conjunction with allies, and with Russia. One implication for other countries is that they could never independently gain experience of a threat cloud, real or simulated, as viewed by a defender accoutred with a diversity of orbital and ground-based sensors. Accordingly, they would find it that much harder to design and deploy, unaided, a decoy mix that could deceive such surveillance.

Interception rates

But to have a decided edge in the technologies of missile defence will be literally worse than useless if, 'come the day', it cannot yield a decisive result, including against multiple warheads. It will be important thoroughly to ascertain a representative spread of possibilities, via field tests and simulations, before any system goes into full-scale development and procurement.

This is emphasised partly because of experience from SDI days concerning weapons concepts about which hopes were high initially but which have now faded into history. Two such genre were the particle beam in Space and the Free Electron Laser, its tunable beam either generated in Space or reflected via a Space platform. A third was the nuclear-pumped X-ray laser. This genre would have involved, in time of crisis, a submarine lofting high into the atmosphere a nuclear charge with directional lasing rods attached. This charge would have exploded driving pulses down the rods towards incoming targets a split second before the

whole device disintegrated. It sounds surreal but one eminent authority who did not himself think it desirable told me it could well be feasible.

The importance of adequate testing is underlined by the difficulty of even the simplest intercept if the nuggety target is not a metre across and the closing speed a few kilometres a second. Witness the on-going debate about hittile interceptor warheads as opposed to fragmentation ones. To which must be added the received doctrinal view that even theatre defence against ballistic missiles should be two tier and by the further requirement for close-in defence against cruise: this in the form of cannon-fire or guided shells or lasers. Rotorcraft could have a special role to play here.

In the original BMD debates in the early 'sixties, great play was made with the trade-off between cost and benefit, one conclusion usually being that the cost of comprehensively defending the United States against the near-term threat from the Soviets would cost maybe 15 times as much as they would have to expend on beefing up their missile force to saturate the defences in question. For good reasons, we have all moved away from such calculation. But we still should ask what resources we want to see tied up in active missile defence at sea or wherever.

Enemy options

Much depends on the options an opponent might exercise. At the bottom end of the scale, there is the demonstrative use of missile power, perhaps indeed to expose the shortcomings of the other side's interceptor system. To opinion at large, the very word 'missile' still connotes a kind of ordnance that is peculiarly menacing. The random firing of a few unguided rockets can attract world media attention as militants from the Bosnian Serbs to the Hezbollah have proved well aware. Likewise, the sinking of an Italian battleship by Luftwaffe guided missiles in 1943; of an Israeli destroyer by an Egyptian Styx in October 1967; and of two British ships by Exocets during the Falklands War entered the annals in a way most individual acts of war never would. Similarly conspicuous have been Beijing's test firings of missiles into the waters near Taiwan.

A broader spectrum of possibilities includes the use of rockets in the immediate battle area as in Napoleonic times and, more notably, on the Eastern Front in World War Two. It goes on to include wide area strikes including against ports and naval bases. If, in 1944, Hitler had directed his V-1s not against London but against our embarkation ports, the invasion of France through Normandy would have been gravely in jeopardy. Eisenhower was among those aware of this: 'If he (Hitler) had succeeded in using these weapons over a six-month period, and particularly if he had made the Portsmouth-Southampton area one of his principal targets, Overlord might have been written off.'[7] Nor should we discount the part the cruise missile might play in deep intrusions. It might not be at its best at ultra-long (nor, indeed, ultra-short) range. Nevertheless, types able to strike the respective continental heartlands were deployed on submarines by each Superpower in the course of the 1980s.

The question of what bearing mass destruction (and especially chemical and biological) warheads might have on such scenarios is moot. There is a widespread presumption that they could be introduced into a local battle very readily to offset the technological superiority of the West overall. If so, this would likely in the near term involve delivery by missile if only because the said warheads would probably have been held back under special command. But it may in due course be feasible to deliver germs by drone aircraft only a few centimetres across.[8] Besides, the ultimate logic of the whole argument might be a clandestine biological attack on the West.

Allied responses

Something to conjure apropos Allied options is that the offensive missile is eminently suitable as a means of power projection from fairly small warships. It therefore has the potential to enable the smaller navies to make a due contribution to the dissuasion or defeat of land-based aggression, to remove a malevolent dictator from office or at the very

least disarm him strategically. Such a pre-emptive strategy has assumed some prominence, certainly in the United States and Britain, not just apropos Saddam Hussein or Milosevic these last few months, but generally over the last several years. Nor can it be denied there is much to be said for it. Not seldom the best time to intercept a long-range missile, ballistic or cruise, will be while it is on the production line.

What is urgently needed, however, is coherent doctrine for the management of such contingencies in pursuance of arms control. Thus, it is all very well talking about zapping a missile thus. But what about meting out the same treatment to a germ bomb in a laboratory flask? Does it exist? Where is it? Will it diffuse on impact? Is the adversary state or political movement concerned with preventative research or deterrence or genocidal aggression? And could you conceivably deal with a continental polity extending over maybe millions of square kilometres the same way as you might a small littoral one? If not, on what principle do you base a distinction?

There certainly has to be another operational strategy to implement alongside active defence and pre-emption. It should be passive defence. Here one is concerned with deception, concealment, hardening, mobility and dispersion. Fleets at sea are well placed to apply these tenets, not least hardening in the sense of excluding the contaminating effects of mass destruction warheads. Concealment against reconnaissance may be the least easy to handle. However, the exploitation of cloud cover, actual and predicted, can make a significant contribution. Passive missile defence also reinforces whatever general tendency there may be for the ships in a task force to become smaller but more numerous. As regards facilities ashore, it may be as well gradually to enhance their robustness against a medium-to-long term threat of precision missile attack.

With active defence, some of the more awkward questions about aim and purpose overland might be circumvented by recourse to barrier lines at sea. Advocates have envisaged ships extended down the Mediterranean, in the Straits of Taiwan, each side of Korea, across the Sea of Japan and so on. Discussion on this score has thus far been entirely about BMD. Yet again, however, one has to say that defence against the cruise-missile is no less important, not least because of its matchless suitability for mobile deployment at sea or elsewhere. The heliborne and/or shipborne defence against 'cruise' would involve, as implied already, co-operative engagement close in. However, that is hardly a brick suitable for building a barrier line across hundreds of kilometres.

But let us follow for now the prevalent disposition and look just at BMD. The spotlight *vis-à-vis* barrier line deployment has mainly been on the Mediterranean, this with reference to threats against Europe from the Islamic world. A basic datum has been that a frigate bearing marinized Theatre AA Defence (THAAD), say, could cover against a light attack with unitary warheads a sector 200 km across, albeit less dependably towards the outer fringes owing to acute vectoring.

Manifestly, there has been a tendency to overstate the possibilities, especially as regards the Graeco-Turkish arc. Inherent operational difficulties are compounded by geopolitical uncertainties. What part would Turkey feel willing and able to play? What about the special status of the Black Sea? What would be the geographical limits of NATO and of the EU across the Balkans? Very similar questions can be posed apropos the Western Pacific or anywhere else one cares to mention. Always to look for, too, would be rules of engagement and routines for multinational consultation that met the anxieties of local countries regarding the drift of lethal contaminants after the so-called 'salvage fusing' on interception of mass destruction warheads.

What has tended to merge with consideration of barrier lines is that of Boost Phase Interception (BPI). The case for BPI is in part that the highly fragile and visible casings of ascending rockets are thereby exposed to attack. But also it is just after boost phase that a capsule may separate out into multiple warheads. A barrier line close enough to an enemy shore to effect BPI would

be remarkably in accord with the Alfred Thayer Mahan precept of defensive blockade.

Not that such a juxtaposition would be easy to contrive. Take the ultimate example, the MX Peacekeeper ICBM. This is designed to burn out at an altitude of 200 km. But Pentagon studies have shown that, for a 25 per cent sacrifice of warload, it could be made to reach burn-out in less than a minute at 80 to 90 km. Reaction time could thus make very tight demands. Geometrically, too, the challenge would be considerable. A capsule 'debussing' at an altitude of 100 km would barely be in line of sight to the surface 800 km away.

Interception from above

Cognisant of these various problems, Henry Cooper was calling by 1995 for the following solution to comprehensive BMD defence. Forget Ground-Based Interceptors, an exclusion that evidently related to his deep contempt for THAAD. In the short term, the United States should modify 22 Aegis cruisers to deploy worldwide 650 upper tier BMD interceptors, starting at the turn of the century. They would have to be freed from proscriptions (under the ABM treaty) against receiving data from external sensors. Then they could, in his judgement, defend the United States (and NE Asia and Europe) against 'a limited number of missiles launched from anywhere on Earth'.

Like Ronald Bell of the National Security Council lecturing to the Marshall Institute that October, Ambassador Cooper cited a recent article in *Aviation Week* averring that countries like China and North Korea could, within five years, be supplying their friends with submunitions for dispersal from ascending ballistic missiles. He duly concluded that Space-Based Interceptor deployment should begin at much the same time as the Aegis adaptation; and be swiftly followed by Space-Based Lasers.[9]

I have already intimated my own opposition, on grounds that are as much philosophic as operational, to the weaponisation of Space in so categoric a sense. But let me conclude by stressing how fast another approach to elevated engagement is coming up the missile-defence agenda. I refer to the Airborne Laser (ABL). For some years, the USAF has been developing such a weapon independently of BMDO but with BMD as its cardinal purpose. It is set in a modified 747 and has an oxygen-iodine laser as its primary beam source. It is due to do its first live interception test in 2002 and enter service in 2006.

Oxygen-iodine lases on a wavelength (1,315 nanometres) that may allow atmospheric penetration more than other lasing wavelengths do. Accordingly, it seems well adapted to engagement over quite long ranges (typically 250 km) of rockets in boost phase. Meanwhile at the strictly local level it seems adapted in principle to coping with the risk that expeditionary forces deploying against opposition may be much exposed, especially during initial entry, to short-range rocketry. At present, this may only be countered by passive defence, pre-emption or instant counter attack.

What is not indicated thus far is whether this weapons genre might be effective against the sea-skimming or contour-hugging cruise missile.[10] But in 1987, a USN experiment along generically similar lines was said to have incapacitated three subsonic drones. What must, in any case, be considered is whether the ABL might sometimes be capable, perhaps embarrassingly so, of damaging soft targets on the surface. In 1987, the late Lord Zuckerman warned against the 'death ray' connotations of Space-based laser weapons being able to ignite substances on the Earth's surface. Granted, the genre he apparently had in mind[11], the Free Electron Laser, was rather unlikely then and is extremely unlikely now to figure in any BMD panoply. Nevertheless, an admonition by Solly Zuckerman should be heeded. In World War II, he was a pioneer of the application of operational analysis to tactical aviation.

Still, any embarrassment might be coped with by keeping the ABL under separate command and control, much as nuclear and chemical weapons have customarily been. But the prior question is how ready will Washington be to sell the ABL to allies or, indeed, enter into multinational arrangements. At all events, the question of soft surface

targets becoming entrained in ABL targetting is less acute on the High Seas. It may be that the ABL will be one strand in a tendency for the multi-engined long-range aircraft to assume again more prominence in maritime strategy as we progress through the missile age.

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PROFESSOR

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Brothers in Arms

Six months with an Armoured Infantry Battalion in Bosnia

'WELL, I was going to offer you the chance to go back to sea in a carrier, but your CO rang and said that I should offer you something unusual' said my appointer. Sounds promising, I thought . . . 'so how would you like six months in Bosnia – over winter?' Taken aback is probably an understatement. But it seemed a great opportunity to get to know the Army and a new country – just too good to turn down.

At this point I'll explain the background. After the Dayton Peace Agreement in 1995, NATO formed the Combined Joint Civil Military Task Force (CJCMTF) to carry out civil military co-operation, CIMIC, in Bosnia Herzegovina. Put simply, this was a group of military personnel formed to help implement the civil side of Dayton. Although the military side of Dayton had been achieved extremely rapidly and efficiently by the Implementation Force (IFOR), and maintained by the Stabilisation Force (SFOR), the civil side was lagging and it was becoming clear that the initial year long commitment of significant NATO ground forces was woefully short of the mark. CJCMTF was to try and help out using military resources to achieve civil aims. However, I don't intend to discuss CIMIC here other than what is necessary for background – that is for another article, for there are significant operational and strategic lessons to be learnt from CIMIC operations in Bosnia. In a nutshell, we are making the best of a bad job, but we are not getting it right – so watch this space.

From the word go, MOD decided that the UK commitment to CJCMTF would be tri-service and thus there are RN, RM and RAF personnel, from all branches and specialisations, including reservists, serving six month tours, which are completely separate from the Army 'regimental' deployments to the country. PJHQ run the manning side and it is interesting to say the least – being charitable, I guess that co-ordinating all three Services cannot be easy. So bear with me – I was actually appointed to be part of a two man team in Jajce (in Central Bosnia), but discovered by ringing the chap I was relieving that he was actually based in the Divisional Headquarters in Banja Luka, where I then thought I would go, but landed in Split to be told to wait for two days because I was joining the 'Battle Group in Gornji Vakuf'. By now, I was confused, not a little cross and beginning to think that turning down that carrier was, as A. A. Milne would have put it, A Big Mistake. The icing on the cake was that a Czech Air Force Hip helicopter was to fly me to Gornji Vakuf and they make Sea Kings look modern.

In reality, I struck gold. The job at the Divisional Headquarters was re-organised away and in any case I think life at 'The Puzzle Palace' would have driven me to uckers very quickly. So I eventually arrived at Gornji Vakuf, a town of about 20,000 three hours' drive from Sarajevo, where one of the two UK Battle Groups is based. Gornji Vakuf is infamous for its extremely vicious urban fighting between Muslims (known as Bosniacs) and Croats, and even now there is a confrontation line running down the main street which the ethnicities rarely cross. It was also where Lance Corporal Edwards of the Royal Welch Fusiliers was shot dead by a sniper, the first British casualty in Bosnia; a simple memorial, interestingly completely un-vandalised, marks the spot. Practically every building had been badly damaged and there are still many ruined buildings throughout the town. Unemployment is about 70% and the administration of the town is paralysed by political infighting and petty power politics. It is, in short, a real dog's breakfast of a place.

Under Commander SFOR, a 4* US general, Bosnia has been divided into three Multi-National Divisions (MNDs), all 2* commands; MND(N) based in Tuzla and run by the Americans, MND(SE) based in Mostar and run by the French and MND(SW) based in Banja Luka and run by the British. All the MNDs contain troops of different countries and all are run *very* differently along national

lines. Within MND(SW), there are six Battle Groups — two British, one Canadian, one Dutch, one Czech and one Belgian, all with a geographical chunk of MND(SW) to cover. A 'Battle Group' is an operational entity combining armour (and by that I mean light (Scimitar) or heavy (Challenger) tanks) and infantry (in this case Warrior tracked vehicles with a 30 mm gun and 7 troops in the back, known as 'dismounts'). All this is commanded by a Lieutenant Colonel (a Commander equivalent to those real dyed-in-the-wool dark blues) that roughly equates to a two ship non-CVS Task Group in terms of operational clout and numbers and seniority/experience of staff to run it, though it is obviously difficult to compare. At Gornji Vakuf, it was the lst Battalion The Worcestershire and Sherwood Foresters (1 WFR) equipped with Warriors and 680 odd of the finest fighting youth produced in Nottinghamshire, Derby and Worcester. Amongst their battle honours are none other than Belle Isle and the Glorious First of June and they even have a naval crown in their regimental crest. They are also affiliated to HMS *Nottingham* with whom they have a very productive and enthusiastic liaison. The other British Battle Group was the Queen's Royal Lancers (QRL) based in Mrkonjic Grad, who as a Cavalry regiment (with a RM officer and a CPOMEA from CJCMTF attached – a clash of cultures to say the least!) had some serious heavy metal in the form of Challenger and Scimitar tanks. However, in order to provide balanced fighting forces, the Battle Groups had swapped over a company of armoured infantry and a squadron of light tanks. As a result, 1 WFR had two companies of infantry (or 'bayonets' to use the lingo) and a squadron of light armour and the QRL had two squadrons of Challengers and a company of armoured infantry. Finally, 1 WFR had a HQ company and a Support Weapons company (MILAN anti-tank missiles and mortars) which had been hacked around to provide a rear party back at Tidworth, a training wing out in Bosnia and the Battle Group Headquarters staff. If you work on about 120 people in a company or squadron, you get some idea of the scale. If you followed all that, then you are doing a damn sight better than I was on Day One!

Battle Group Headquarters was located in a former radiator factory in Gornji Vakuf using the old office block as its main building. Whilst it served its purpose, you grew used to scrappy carpet, broken chairs and desks, bullet holes in the walls and ceilings and the taped-up windows, not forgetting the mine fields opposite and round the back of the perimeter fence. The British Army puts CIMIC in the G5 staff division, and my main task was liasing with locals and charities, working with and alongside the International Organisations and working on projects to try and generate employment and returns of displaced people. Through a combination of luck, circumstance and manpower problems, I ended up replacing a Major and commanding the G5/CIMIC element of the 1 WFR Battle Group, eventually with three Army/RM captains, two Warrant Officers and four senior NCOs under my command. In addition, I had a constant interface with the G2 intelligence side and became the Battle Group's intelligence and political 'expert', titled 'All Sources Information Officer' (ASIO), for 5 weeks, which included the time of the Kosovo crisis and reaction to Brcko and Bosnian Serb political crises. We were only allowed off camp when on duty, with no leave 'ashore', always armed (and loaded) off camp, always in a minimum of pairs and, obviously, had to work with interpreters. It was generally frustrating, irritating and depressing work in adverse conditions with the pace of progress incredibly slow and only rarely alleviated by the odd high spot. As with ships, it was the sense of humour that was the safety valve and kept life for all on an even keel.

Although this was my first serious contact with the Army at large, I was hugely impressed by 1 WFR. Although young, with an average age throughout the battalion of just over 20, they came across as highly professional, well trained and tough. I watched, listened and asked questions ceaselessly to try to gain an idea of what they were really like and how the Army operated. Assuming it is not a leap of faith to reckon that 1 WFR are representative of the sharp end of

the Army, my conclusion is that the Army and the Navy are indeed brothers in arms.

We are closer than we think in approach, attitude and operational stamina. They are similar people to us, at all levels, and thus their outlook and train of thought mirrors ours. Although we clearly fight in significantly different arenas, their operational tempo is very close to ours in terms of training, exercises and firings. We both maintain and regularly exercise the ability to step up from normal duties to a higher operational footing without fuss, drama or panic. Above all, we both have the same acceptance of hardship and privation, both in normal circumstances during operational deployments and in more extreme conditions when the situation demands it, that characterises effective and efficient fighting units.

Not only that but they have enormous goodwill towards the RN. Many soldiers had friends or relatives in the RN or RM and they viewed us very much as comrades in arms. The experience of working with the Commando helicopter squadrons in Northern Ireland, who would frequently fly and do troop moves in conditions in which the RAF would refuse to fly (much to the soldiers' disgust) has created a solid base of respect and affection for the RN that took me by surprise and which I found very gratifying. Privates would often recount tales of being lifted somewhere deep in 'bandit country' in South Armagh by a Sea King after an RAF helicopter had turned back and refused to try, usually in rain and at night, and it was striking how deeply these had embedded professional respect for the RN corporately amongst the soldiers.

There was also great curiosity about how we went about our business, particularly deployment cycles and women in the frontline. The soldiers were especially curious about submarines and aircraft carriers and most quailed at the thought of heavy weather. I found myself answering questions on all areas of life at sea though I ran out of steam when it came to submarine communications! Throughout it all, there was a vocal and oft repeated view that we put up with conditions worse than they did and we deserved genuine respect.

There was also a willingness to see what we could bring to the land battle. Those who had come across it, usually in the Falklands, appreciated the 4.5" gun, but it was stressed that we needed something bigger and heavier. The deployment of HMS *Invincible* to the Gulf with a mixed bag of Harriers and the launch of a Tomahawk from an SSN were extremely useful for me to be able to point out that we can provide a degree of fire support ashore, and that it is slowly getting bigger and heavier. My constant mantra was '. . . from the sea' and explanations of the concepts of Maritime Manoeuvre and the Maritime Contribution to Joint Operations (MCJO), both of which I luckily knew in depth from my last appointment, were warmly welcomed and closely questioned. The over-riding view was that Maritime Manoeuvre/MCJO had to be the way ahead and this was combined with a determination to work through the inevitable difficulties. Regrettably, there was deep cynicism over the RAF and its capability, ability and reliability, both operationally and technically and I take no pleasure from saying that.

Around all this, I noticed in particular three points. The first was the incalculable value and massive benefit we gain from joint exercises and especially from exchange visits. Many 1 WFR soldiers had spent time onboard HMS *Nottingham* and to a man they said how much they had enjoyed it and found it a fascinating experience. I had never really appreciated how useful a regimental affiliation could be and I have learnt the lesson well. Joint exercises also show us at our best and they work even better when there is an opportunity to socialise between soldiers and sailors afterwards, such as in the Falklands.

The second point was just how very good their senior NCOs are. Their experiences in Northern Ireland and Bosnia have fashioned, through live operations, several generations of operationally experienced and very able leaders that I believe are in a different league to their equivalents in the the RN. I accept that in an infantry regiment, NCOs have to have strong leadership and management skills to get on, and I was assured that the quality is often not as deep in non-teeth arms. Almost all

have done multiple tours in both Northern Ireland and Bosnia, many have been shot at in anger and one told me, without boasting and completely matter of fact, that when he was in Gorazde in '95, his battalion had fired *approximately 30,000 rounds of live ammunition!* That kind of military experience simply cannot be underestimated or bought. In short, these guys *really* know their onions.

The final point is that in comparison to other nations, we are in a league of our own when it comes to sustaining an effective fighting force overseas for an extended period. Our ability to arrive in theatre trained up and ready to go, to maintain operational effectiveness and adjust the operational tempo according to the political demands in country, and to be relieved effectively and on time, and to be able to sustain this roulement, is unmatched. Combine this with experienced command and leadership at all levels, the information, intelligence and analysis ability and add the soldiers' natural facility to mingle and gain the confidence of an initially hostile general public and we do make a truly formidable enemy. The Americans, French and even Dutch are nowhere near as capable, particularly when it comes to working in a hostile civilian environment, though clearly from Northern Ireland we have great experience of working around divided political loyalties. On realising this, it was interesting to read Greenjacket's article in the last *Naval Review* on the merits of other navies in sea training. Whilst I am in no position to counter his arguments (nor do I disagree with some of his points), I would wager very good money that this military analogy of highly effective fighting forces sustainable indefinitely does spread to the maritime environment and accurately mirror itself for naval forces. I am well aware that this priceless ability does not come without its cost in financial and personal terms, but it was exhilarating to realise from conversations with locals, politicians and aid workers just how very highly UK armed forces are regarded.

I was genuinely sad when I had to leave *earlier* than expected due to Charge Course – I had had a tremendous time with the Army. I learnt a huge amount and did my best to promote the RN and, childish though it may seem, DPR(N)'s inexhaustible supply of stickers, pens, calendars, bookmarks and gizzits were a great help. Above all, I realised that the Army and the Navy have far more in common that we initially think and we are effectively the same animal. We must capitalise on this underlying bedrock of goodwill and mutual respect: through joint operations, exchange visits and socialising, we can get to know each other very well and this can only reap benefits for the future. We are indeed brothers in arms.

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Footnote by the author: My rank caused endless confusion amongst the soldiers. An Army Lt is very much a junior officer still learning the ropes and thus has little clout. My dogged explanations that a Lt RN equated to an Army Captain led to the soldiers making life simple for themselves and addressing me as 'Captain Talbott', which I quite took to!

In Defence of the Three Tier Commission

IN his article, 'The Three Tier Commission – Is the Officer Corps Under Threat?' (*NR* Jan '99), Commander Betteridge raised some important issues pertaining to junior officer retention which, he concluded, if not addressed, could endanger the whole officer structure. He dwelt upon two problems, evident to differing degrees within most Branches, but which affected the Fleet Air Arm in particular; namely, the rising rate of voluntary retirement and the reducing numbers of transfer applicants. Being a former Aviation Branch Manager himself, both subjects were especially, and understandably, close to his heart. He then focused on the high percentage of officers who will be required to transfer from the twelve year Initial Commission (IC) to the sixteen year Career Commission (CC), under the Three Tier Commission (3TC). Against a backdrop of worsening retention, he speculated that there may not be sufficient officers available to transfer and that the 3TC would therefore become unsustainable. Up to this point his article, although very pessimistic, was rational and thought provoking; although I would suggest that it is far from clear that it is 'reasonable to suppose' that patching up an old system is really 'the safe way to proceed'. However, I believe that his recommendation that a proportion of new entrants should join directly onto the CC, as a 'safety net', was neither a logical answer, nor a solution to the putative problem.

One of the conclusions of the Officers Study Group (OSG), back in 1993, was that the current methods of entry, embodied within the List system, were divisive; they created a 'class' structure within the officer corps that was both counter productive and out of step with modern perceptions. Commander Betteridge acknowledged this to be 'one of the worst aspects of the old system' which made his own recommendation, which sought to replace one class system with another, all the more incongruous.

Aside from this contradiction, it is unlikely that the offer of a sixteen year commission from the outset would, in fact, reduce the numbers who choose to retire voluntarily before the end of their commission; although it might prevent some 'leakage' at the 12 year point. Current trends suggest that officers who wish to leave early, for whatever reason, or who are seduced by the promise of more attractive opportunities and rewards in the civilian sector, will vote with their feet regardless of whether they are on an IC, a CC or even a Full Term Commission (FTC). Today, the award of a sixteen year Medium Career Commission (MCC) does not reduce the number of officers who opt to retire in the earlier years of their commissions; and I suggest that the award of a CC, in the future, will also fail to provide a reliable 'safety net'; I contend that we would not 'fool' anybody in this way.

It is the cause, not just the symptom, that must be treated. To safeguard the officer structure, present or future, the Service needs to ensure that it offers the opportunities and delivers the life-style promised within its recruiting literature. Of course that which attracts potential officers is not necessarily the same as that which retains them five or ten years later, by which time their personal circumstances are likely to have altered significantly. However, if officers can see that a career in the Royal Navy, when viewed in the round, represents an attractive package, it is likely that sufficient numbers will stay and transfer.

That is not to say that the structure cannot be tailored to encourage transfer. At present the system is encumbered by the offer of Gratuity Earning Terms of Service (GETOS) to those on a Short Career Commission (SCC). GETOS is undeniably an attractive recruiting tool but it is an unhelpful retention measure because it pays officers a handsome sum to leave on completion of their SCC. Under the 3TC there will be no such golden handshake on completion of the IC, only the promise of a preserved pension payable at age 60. Interestingly, the other two Services dropped GETOS several years ago.

However, for the next eight years (twelve years for Aviators) the officer corps will contain former SCC officers with reserved rights to GETOS. This is the group that needs to be won over and convinced that a longer

career in the Royal Navy is an attractive option. Under the 3TC, the transfer process has been made as simple as possible for prospective candidates who, even before entering the transfer zone, need do no more than ensure that the appropriate box on their confidential report is ticked. No formal letters are required and the whole process is designed to minimise any perceived hurdle. It also allows officers to make their intentions known, even before entering the transfer zone, thereby providing manpower planners with advanced warning of any likely deficit and enabling them to take timely action. Reporting officers should encourage their subordinates to seek transfer at an early stage and, since all officers will in future join on an IC, a culture of transfer needs to be developed from the outset, there being no other route to a longer commission. Of course, such a culture has well established precedents; both the Chaplaincy Service and former Instructor Branch recruited all entrants onto a SCC before offering them the opportunity to transfer to the MCC and beyond. With great success they operated what was, in effect, an early form of 3TC. One could argue that this was, indeed, one of the 'good aspects' of the old system!

Given that a high percentage of officers will be required to transfer, officers will hopefully feel encouraged to volunteer in the knowledge that their application is likely to succeed. Furthermore, the award of early transfers, as officers enter the transfer zone, or soon afterwards, should be regarded as the norm and not the exception. This will be of significant advantage to the individual, who will achieve early eligibility for certain career courses and will also be able to make longer term plans with added security before the watershed age of 30. It would also be of benefit to the Service, which would gain increased stability within manpower planning. Finally, the key role of the immediate pension (and any alternative resulting from the review of pensions) as an incentive to transfer should not be forgotten. The financial advantage of only four years' additional service on the CC is enormous and will be pointed out and emphasised far more vigorously than at present.

Statistically, the dominant factor in determining whether an officer stays or goes, and one completely beyond the Navy's control, is the state of the economy. History shows that a healthy economy fuels premature retirement, whilst a recession signals improved retention. In recent years we have enjoyed sustained economic growth, reflected by high rates of VOLRET. Therefore, in the face of the current economic slowdown, we would expect to see the trend reverse without any internal intervention whatsoever; not that such a hands-off approach is recommended! If VOLRETs were ever to plunge, the 3TC provides manpower planners with the flexibility to respond in reasonable time, unlike the current system which has no simple mechanism to deal with overbearings.

Contrary to the assertion that the 3TC has a 'suspected flaw' and that manpower planners have ignored the warning signs and are stumbling blindly towards a metaphorical precipice, the recommendation to recruit certain officers directly onto a CC was considered by the OSG and also examined last year but, after careful deliberation, was rejected.

Career structures, including the 3TC, provide no panacea; they underpin the Service career, supported by appropriate Terms and Conditions of Service. The real attraction of a career in the Royal Navy is about much more; such as reward (including challenge, opportunity and remuneration), development (including the acquisition of skills and recognised qualifications), leadership, management and overall quality of life. If we get these things wrong then we should indeed ask ourselves 'Is the Officer Corps Under Threat?' The 3TC will however play a role: it will ensure that officers enter on a 'level playing field', unconstrained by Lists, and will present them with the opportunity to progress, in open competition, as far and as fast as their ambition, ability and Service requirements permit. But to sustain the 3TC, or indeed any career structure, the Navy must recruit and retain sufficient numbers, and this requires a raft of wide-ranging initiatives, not merely the offer of a sixteen year commission to a select few on entry.

L. P. BROKENSHIRE
CAPTAIN, RN

A View From the Bridge Card

IN 1979 I crept onto the bottom right hand corner of the Bridge Card, as the junior Submarine Commanding Officer of the Fleet in HMS *Olympus*. In 1999 I have just left the top left-hand corner, as Commanding Officer of the Fleet Flagship, HMS *Invincible*. The overall recollection one has of those 20 years is of adventure, responsibility at a young age, comradeship and professional excitement. Now seems an inescapable moment to review trends and changes that have occurred over that time. In writing this article I have found it most refreshing to remind myself just how many things have become so much better in the Fleet over 20 years.

The Fleet in 1979

Let me start with a reminder of the composition of the Fleet in 1979. *Hermes*, the last of the conventional carriers was still in commission, although converted for Sea Harriers. *Bulwark* was still just running and *Invincible* was about to commission. *Blake* was our one remaining cruiser. For those who insist on measuring the capability of the Royal Navy by the number of 'escorts', of 66 we had 53 operational, including *Bristol*, 5 County Class DLGs, 6 Tribals and the newly delivered, but gunless *Broadsword*. There were 21 running submarines out of 32 and we had just launched our twelfth SSN. We had four Royal Marine Commandos. Rather surprisingly, there were only 16 MCMVs active in that role, with the remaining 22 in Hong Kong, on Fishery Protection, or being run by the RNR.

John Nott was still around the corner. We thought we were comfortable with Dockyards at Chatham, Portsmouth, Devonport, Rosyth and Gibraltar. We had Colleges at Dartmouth, Manadon and Greenwich. The Defence Budget of £11bn stood at 5.5% of GDP. Within that budget, 41% was spent on personnel, including pensions, and 44% on equipment. Running costs were certainly a problem, with several ships about to be put alongside to save fuel. In fact, *Olympus* was on the list but reprieved when it was pointed out that a Leander used as much fuel in a day as a conventional submarine used in a month.

The Argentinians were not even on our mind but we were about to receive a healthy influx of new capabilities into the Fleet. Sea Dart was replacing Sea Slug; Seawolf was replacing Seacat; 2016 digital sonar was replacing 184; towed arrays were in the SSBNs and some SSNs. The Sea Harrier and Lynx were in service in small numbers. Blue water operations of the Cold War were our design and procurement focus and the Naval Staff was arguing hard for two amphibious carriers to replace *Albion* and *Bulwark*. Only 20% of defence contracts were put to competition, outside of which some Leanders were being refitted and upgraded to Seawolf at a cost of £80m each.

Admiral Sir James Eberle was the Commander-in-Chief Fleet; his Commanding Officers included Commander M. C. Boyce (*Superb*) and Commander J. R. Brigstocke (*Bacchante*). On taking command of the Fleet, Admiral Eberle had signalled to his Commanding Officers that his primary aim was, while maintaining deterrence, to improve retention. This was to be done through delegation to the lowest prudent level, having a stable fleet programme with less stretch, finding time for sport and encouraging a sense of fun. I am not sure we managed to find enough time for sport but we certainly had fun.

In 1979 the strength of the Naval Service was on the increase at 64,000 with a further 8,000 under training. We recruited 800 RN and RM officers and 10,000 ratings and other ranks per annum. There were 68 Admirals, not including Admirals of the Fleet. The annual salary of a full Admiral was £31,000 and of an Ordinary Seaman £4,450.

It is more difficult to recollect a day in the life of the Fleet in 1979, especially as at the time I had more of a worm's eye view and one's memory tends to be highly selective. But one can certainly remember the things that dominated, especially if they made life difficult. Remember the old pusser's telephone system with that spider diagram which offered a choice of dialling route – getting through was a triumph, especially when the only telephone was on the gangway.

In the Dockyards there would be only one or two car passes per ship. Remember the carbon paper existence of a Correspondence Officer before the photocopier; even when the only one did arrive, it went to the MCO where it was kept under lock and key. Remember those endless inspections by senior officers, with Divisions as the centrepiece – and the whiff of 'because it's good for you' that was too often in the air. Remember when the cost of living, raging inflation and repeated disappointing pay reviews made cars and petrol such major items of expenditure, making us more dependent on public transport for those ghastly Sunday evening journeys. When one did get back to the ship, one might well have to queue for a telephone on the jetty to ring home. Harbour hassle was alive and well, but soothed by the 24% pay rise that came with a change of Government.

Ships' programmes in 1979 were certainly stretched, but much of that was caused by choosing to contribute to huge set piece NATO Exercises, often of limited value at unit level. We also had, and still have, our worldwide roles, though in 1979 Armilla had not been formalised and *Endurance* was our only routine visitor to the South Atlantic. We aspired to a Group Deployment every year, preferably to the Far East or otherwise to the USA and Caribbean. And if that was not enough to keep us busy, Flotilla or Squadron training periods were put into the programme. But for all that, what we did was worthwhile; Galtieri was roundly defeated and 10 years later the Cold War drew to a close with no doubt about whether we were on the winning side.

The Fleet in 1999

So where are we now?

The size and shape of the Fleet is now very different, with submarines and escorts reduced by 50% over 20 years, but carriers increased from three to four, with *Ocean* having at last filled the gap left by *Bulwark*. The number of Royal Marine Commandos has dropped to three, plus Commachio Company, but now they are assured a place in the structure of the Joint Rapid Reaction Force. We have Trident in the strategic and substrategic role, TLAM, Harpoon, Vertical Launch Seawolf, Lynx, Merlin, Sea Harrier FA2 with AMRAAM, 'Trafalgar's, Spearfish, Type 23s and 'Sandown's. Although not yet in the Fleet, the order book is impressive too, with the 'Astute' Class TLAM SSNs and the new LPDs *Albion* and *Bulwark* as highlights. More worrying is the agonisingly long wait to replace the Type 42s, meanwhile paying off Batch II Type 22s whose age has barely reached double figures. But on balance, our present and future prospects for Operational Capability are looking pretty good – and all this underpinned by a defence review with a maritime content we would not have dreamt of in 1979. Who would have imagined the British Army ordering strategic shipping to serve within the RFA, or Chief of the Naval Staff and Chief of the Air Staff pooling resources for the next generation of carrier-borne fixed wing aircraft?

There are also some welcome signs that we are shaking off the defensive thinking of the Cold War. In *Invincible*, I changed the title and purpose of my Anti-Air Warfare Officer (AAWO) to the Air Warfare Officer (AWO). Not just semantics, but one of many indicators that we need to focus on the delivery of offensive capability rather than fall into the trap of having to defend ourselves because we are there. The GR7/FA2 combo, under the fighting direction of the AWO, allows us to do this in carriers and TLAM is already enabling our SSNs to make a major new contribution. *Ocean*, *Albion* and *Bulwark*, with the associated Commandos and Logistic Support, will also greatly improve our ability to conduct offensive operations ashore. So we are moving in the right direction and even though procurement timescales will act as something of a brake, from Dartmouth, through Dryad, Sea Training, Warfare Staffs, Doctrine writers, Operational Requirements and Procurement Staff, we all need to think in terms of projecting maritime power through offensive capability.

This will not be easy with the Defence Budget halved over 20 years as a percentage of GDP to 2.8%. At today's prices, the 1979 Defence Budget would have been £26bn and it now stands at £22bn, a reduction of 15% in

real terms. There has been very little change in the 'slice of the cake' between services but as well as reductions in the size of the Fleet, we have had to reduce RN and RM manpower to 40,000 with 4,000 under training. Still 44% of the defence budget is spent on equipment, with two-thirds going to competition, but only 37% on personnel. However there has been a significant real terms increase (23%) in expenditure on buildings and works, some of it for the benefit of personnel in the form of better living accommodation but probably a greater share on post re-organisation new buildings such as Abbey Wood and Victory Building. The Able Seaman (there are no longer any Juniors or ODs) now earns £12,000 pa, a real terms increase of about 30% since 1979. A Leading Seaman earns £19,000 pa, which is the national average wage.

But that does not explain where all the money has gone. What happened to the miracle of the Type 23 being more capable than its predecessors were but at a lower capital and running cost? Of course there has been equipment cost growth, in spite of the squeeze on capabilities and size of ship's companies, but has that same discipline been applied ashore? Goodness knows how many civilian and military staff are involved with budgets, but there may be a clue in that over 20 years the number of industrial civilians employed by MoD has reduced by 75%, whereas the number of non-industrials has only fallen by 35%. A Type 23 has 14 officers, including the Flight. For every 14 Naval and Royal Marine Officers in the Fleet, there are 4 in the 2SL HQ, 3.5 working for FOTR (not including trainees), 1.5 in the margin, 3 working for CFS and about a further 5 working for VCDS, including in the PJHQ. Not only does this seem somewhat top heavy but they are all working pretty hard too. Perhaps part of this is because inter-relationships between defence organisations ashore have become so complicated. You only have to look at the number of 'info' addresses on signals. If I may illustrate with an almost trivial example, I have sight of correspondence requesting sunglasses for aircraft carrier flight deck personnel in bright conditions, such as in the Gulf. This was raised in April '98. A year later the correspondence has expanded to seek opinions from no less than 10 organisations, for example incorporating health and safety advice that the glasses must be able to withstand the impact of a steel ball travelling at 120ft/sec. There is still no sign of the sunglasses. The New Management Strategy, while increasing some aspects of accountability, does seem to have weakened authority. Whatever happened to 'Commanding Officers are hereby authorised to. . .'?

Trends 1979-1999

So that seems to me to be one trend. What others are there?

The biggest changes by far over the last 20 years lie in the quality and attitudes of individuals, and in the styles of leadership of those who serve in the Fleet. Did it look 20 years ago as if we were heading for a Fleet that is virtually drug free; with alcohol rules that are more for guidance than draconian application; with courtesy and good manners replacing too much unthinking issuing of orders; and the revolution brought about by women at sea so well established? We have bucked the trend and we should be proud of it. Remember fights on the jetty or in night-clubs when two ships were visiting the same port? Remember sailing with stragglers still in jail? I know these things do still happen but the unambiguous trend is for Wardrooms and Messdecks that are more mature, better educated, more interested in self-improvement and altogether more responsible in their attitudes. A suitable topic for late night discussion, but in my opinion much of this is due to most ship's companies now being mixed. The presence of Wrens amongst both the officers and ratings at sea has made us all more tolerant, better mannered and more competitive professionally. The remaining doubt is what it has done for us as a fighting force. Kate Adie, after visiting a Wrens' messdeck in *Invincible* when 70 miles from the Iraqi coast and noticing teddy bears on pillows, did ask whether the women on board really were warriors. That said, and bearing in mind I am making comparisons with the

period before the Falklands and Gulf Wars, I do think that overall there is a significantly more rigorous professional attitude to our fighting capability, both at sea and in training ashore.

Staying with the theme of personnel, there have been some welcome changes, many of which are still working through. Examples are, the move to promotion by selection rather than advancement by roster, open reporting for all, award of NVQs, a fresh attitude to health and fitness, satellite TV at sea, greatly improved communications with families from sea, including e-mail, refreshing the Divisional System through accreditation as Investors in People, much more open information on Navy Board policies, and so on. And of course, all of this continues to be underpinned by unbounded loyalty, immense professionalism, flexibility, resilience and thirst for responsibility. I particularly mention resilience because there have been some very difficult issues over the last 20 years – the Review of Allowances, Options for Change, redundancies, contractorisation of shore billets, the Defence Costs Studies, continuous penny-pinching of operational capability and the fatigue of walking on a treadmill of organisational change. It is remarkable that we have emerged from all this, still with such a strong shared commitment to the ships in which we serve. There are plenty more challenges ahead, including Pay 2000, but probably the greatest is to capture effectively all the new 'rights' legislation within our 'responsibilities' framework. Let us strive to ensure that the rating of the future will go to his or her Divisional Officer and on up the chain of command if aggrieved, rather than direct to a European Court. The same principle must continue to apply to enforcement of discipline through the systems of Court Martial and Summary Trial.

Before looking ahead, I just want to touch on one more area. I have already mentioned the burgeoning complexity of even the simplest tasks. Alas, this is being exacerbated by bureaucracy growing like bindweed. The moment when an Operator Mechanic 2nd Class (OM2) completes the taskbook for OM1 now has to be recorded in no less than 17 places – and that is before the imminent arrival of yet another stand alone computer system which will increase it from 17 to 20 places. Ships are required to muster the baked beans on board more often than top secret books. Unclassified computer software has to be logged and mustered. All ships have to have a Garbage Management Plan; what is wrong with a few paragraphs in Ship's Standing Orders about ditching gash, or not ditching it? So what is to be done? I have one simple suggestion. Thanks to NMS, we now all understand the discipline that one should not be asking up the chain of command for more resources unless one is prepared to offer a compensating reduction. Tough, but it works. I have a request from the front line – could the same principle apply when new bureaucratic requirements are being placed upon the Fleet? For every new log, let's ditch two old ones.

The future

So finally, where should we be going from here?

There are clues sprinkled throughout this article – but I would wish to focus on four areas: Firstly, we must greatly simplify, and thereby sharpen, the accountability of all the organisations, single, tri- or civil service which provide succour to the Fleet. Secondly, we must rein back the suffocation of bureaucracy at sea, not just as a working method but as a highly undesirable state of mind, so that we can spend more time with our families. Thirdly, we must ruthlessly enforce the principle of front line first; this concept was hijacked by DCS but is an enduring discipline to which we must adhere if we are to develop the offensive capability of the Fleet – with the right people to man it. Finally, on rights versus responsibilities, we must ensure our ships' companies believe in access to their rights by the same route as they receive their responsibilities – through the chain of command.

JAMES BURNELL-NUGENT

Learn and Develop New Skills by Reflection

WHAT new management speak is this I hear you cry? Not another fad invented by some 'guru' now earning a fortune on the lecture circuit? No, just a genuine attempt to answer the question 'What is learning?' I was recently faced with the problem of explicitly setting out how I was going to demonstrate my learning through defining the aim, how it would be initiated and the subsequent analysis of results. Brutus (*NR*, Jan '99) quoted Hegel's assertion that 'what experience and history teach is this – that people and governments never have learned anything from history, or acted on principles deduced from it'. There is also a saying that goes along the lines of 'I've got five years' experience' with its possible retorts:

a. Is that twelve months' experience five times or

b. Six months' experience ten times or

c. Five years of continuous learning, resulting in a measurable improvement in performance?

The two coupled together lead one to doubt that we know how to learn. The learning that I am considering is not the theoretical 'revise, pass exam' learning, but the learning that we all sub-consciously carry out as a result of our everyday experiences of life itself.

So, what is learning? Boud et al (1985) argue that in order to make choices about what we will and will not do, we must bring our ideas to a conscious level and evaluate them. They go on to offer a definition of this 'evaluation':

> '. . . reflection in the context of learning is a generic term for those intellectual and affective activities in which individuals engage to explore their experiences in order to lead to new understandings and appreciations.'

Having defined reflection as involving 'activities', how do these activities fit together to form a process? A number of models have been suggested including Ayas (1997 and 1997), Christensen (1996), Peters & Homer (1996), Ramsay et al (1996) and Senge (1993), but all seemed too simplistic. Atkins and Murphy (1993) in their literature review identify three key stages in the reflective process identified by the authors:

a. *Stage One*: Uncomfortable feelings and thoughts trigger the reflective process. This arises from a realisation that the knowledge one was trying to apply was not sufficient in itself to explain what was happening in that unique situation. A sense of self-awareness must be developed to honestly examine a situation and one's own feelings. A key to expressing this awareness is the skill of description (both verbal and written): the ability to recognise and recollect accurately, salient events and key features of an experience.

b. *Stage Two*: A critical analysis of the situation. The person applies existing or new knowledge to derive an explanation of the situation. This process involves examining the components of a situation, identifying existing knowledge, challenging assumptions, imagining and exploring alternatives.

c. *Stage Three*: The development of a new perspective on the situation. The outcome of reflection is learning, which Boud et al (1985) suggest may or may not lead to behavioural changes. The development of a new perspective is achieved through the synthesis of new and previous knowledge, to solve problems and predict likely consequences. This is coupled with evaluation and the making of judgments about the value of things, using criteria and standards.

Boud et al (1985) indicate that reflection is one part of the learning process. Pedler, Burgoyne and Boydell (1991) indicate that '. . . implementation, evaluation and improvement, are consciously structured as a learning process,' and 'Deliberate small-scale experiments and feedback loops are built into the planning process to enable continuous improvement in the light of experience.' From this it could be concluded that to let events take their course is not enough. So in order to learn, then experiments must be deliberately included which are then evaluated through the process of reflection. Taking the Kolb

Learning Cycle as the starting model for the whole learning process:

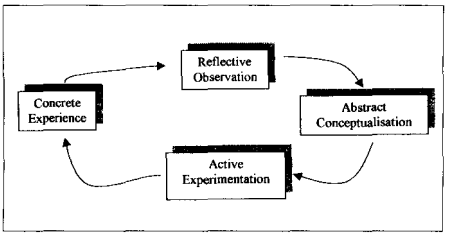

Diagram 1: The Kolb Learning Cycle

And merging the Reflection Process identified by Atkins and Murphy (1993) leads to the following model:

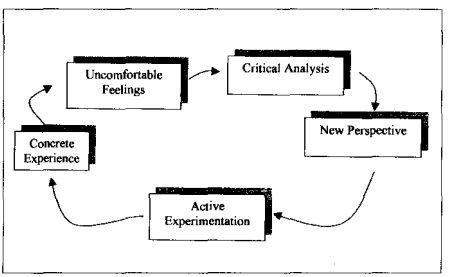

Diagram 2: Modified Kolb Learning Cycle, Incorporating Atkins and Murphy (1993)

However, in this model there is only one trigger for the process and that is the awareness of uncomfortable feelings. This model relies on the 'course of events' to trigger the learning. In order to initiate learning from the outset and mirror Pedler, Burgoyne and Boydell (1991) with 'deliberate experiments' then two more trigger points must be added: those of Personal Interest and Weakness of Knowledge. We all have areas of interest within our private and professional lives; it is only natural to want to try new approaches to see how they work. We also have areas of knowledge that are weak and so must experiment with them in order to improve our ability. These aspects must be designed in from the beginning as shown in Diagram 3.

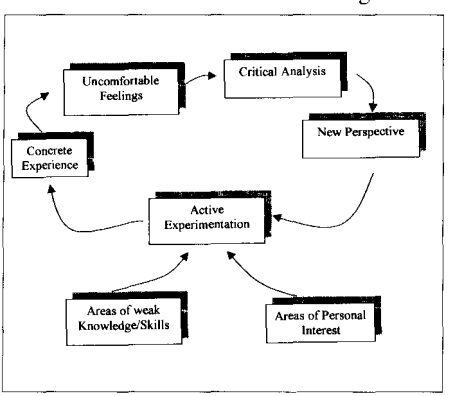

Diagram 3: Modified Learning Cycle Incorporating Personal Interests and Areas of Weak Knowledge/Skills

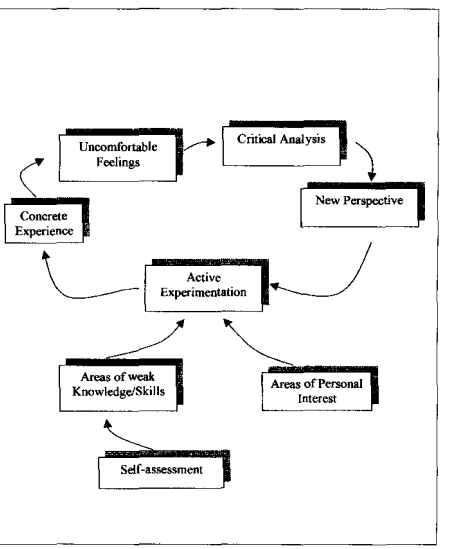

Diagram 4: Modified Learning Cycle Incorporating Self Assessment

But still the model is not complete. In order to design experiments based around a weakness of knowledge these areas of weakness must be identified through some form of self-assessment as shown in Diagram 4 above.

In this version self-assessment is seen here on its own, never to be revisited once the learning loop commences. One of the elements of critical analysis is the analysis of oneself. This analysis will undoubtedly identify areas of weak knowledge, which need

to be explored. Similarly New Perspectives will lead to new Personal Interests that will generate new experiments. Taking these two items into account then gives a completed model, which may be started at any point and provides a continuous loop. This version is a generic learning model:

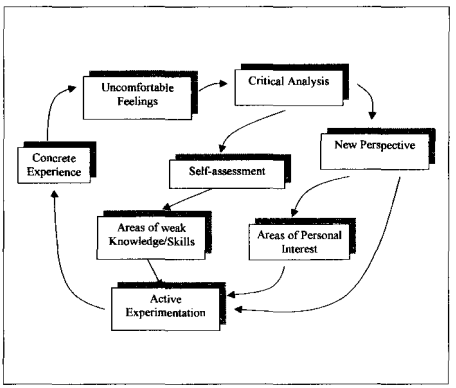

Diagram 5: A Generic Learning Cycle

What I have now developed is a model that allows the initiation of learning from the outset, not just relying on the course of events and our sub-conscious thinking. It provides a process whereby learning can be approached in a formal and knowing manner – a deliberate activity. What will be the result of this learning? – the evolution of the way we do things in order to improve the results or more simply our old friend 'change'.

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A Link Between Chalk and Cheese

Introduction

ALSTON's article 'Leaders and Managers: Chalk and Cheese' (*NR*, Apr '98) sought in part to answer the question 'What defines a Managerial style from a Leadership one?' using a series of traits and axioms to illustrate the difference. However, no explicit answer was given to this question. The impression was that one could be classified as either a manager or a leader and that the two were mutually exclusive.

In previous articles I made two assertions that:

a. Change will need good leadership to make it happen ('Partnering – The Process', *NR*, Apr '99)

And:

b. In order to learn, changes are required ('Learn and Develop New Skills by Reflection' *NR*, Jul '99).

To develop the first assertion the initial part of this article examines the relationship between Management and Leadership and how they might be linked. I shall draw on Alston's article and my own previous articles to try and provide an answer to 'What defines a Managerial style from a Leadership one?'

The second assertion adds a third variable to the Leadership/Management equation, which provides a driver for the link between Leadership and Management.

The third part explores the concept of the mutual exclusivity of leadership and management. Can they be considered as mutually exclusive 'black and white' definitions with hard boundaries?

Change will need good leadership to make it happen

In his article Alston had a recurring theme about leadership and change; this is best illustrated by two key observations:

a. 'Steady state is managed, change is led . . . (C)'

b. 'The Leader needs Managers to manage the status quo thus releasing him to lead those start up, get well or change driven projects where leadership is fundamental to success.'

Admiral LeBailly also adds weight to these statements in his article 'The Management of Fear' (*NR*, Jan '98): 'The Navy is changing and you (Officers) must sense and help to lead that change.'

If a state of no change is managed, then the inference is that a rapidly changing situation or one that requires change to be achieved requires a high degree of leadership. If Management and Leadership are the two opposites then the following can be drawn:

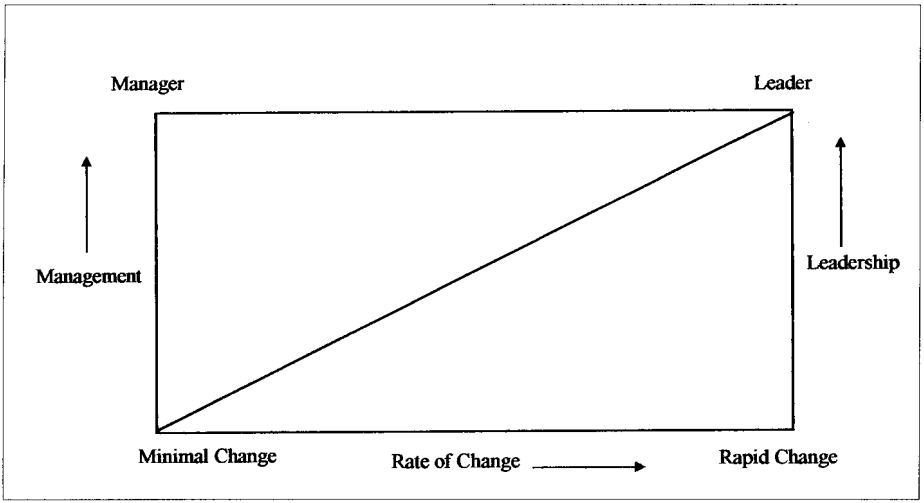


Diagram 1: The Relationship between Leadership and Management for Rate of Change

The line linking Management and Leadership need not necessarily be straight; the shape of this line depends on the level of change at which leadership becomes the dominant factor. A combat scenario is the one where perhaps the ultimate levels of change and leadership are brought together – No plan survives contact with the Enemy!

In order to learn, changes are required

If leaders are good at driving change or coping within a developing situation how does this come about? Another thread in Alston's article was that of teaching:

a. 'The good leader achieves the required performance standard through teaching from experience and first principles.'

b. 'Leaders are more likely to be guided by the rules.'

The key here is that the leader is guided by the rules and adapts them to suit the situation that they are in. Experiments with deviations from the rules result in hard experience from which the leader can learn and make further changes. This ability to learn drives the need for constant change as the situation demands; the leader is never happy with a status quo, always seeking to improve. Because the leader wants to make changes then the implementation of change becomes a habit that is finely developed over a lifetime.

If the argument is accepted that the leader drives change because of the ability to learn then a high degree of leadership, corresponding to a rapid rate of change, equates to a high level of learning in order to be successful. This infers the following relationship as shown in Diagram 2.

If management is no change and maintaining the status quo, then no learning is being demonstrated. From this the following can be developed as shown in Diagram 3.

What we have now is a three-sided diagram that can be put together as shown in Diagram 4.

From this model we all lie on the plane ABC, each of us displaying the differing qualities of the leader and manager to a greater or lesser extent and blessed with varying amounts of learning ability. There is no true manager and no true leader, each is a subtle blend of the other; the true leader and true manager exist in theory only.

What therefore defines a Leadership style from a Managerial one is the ability to learn

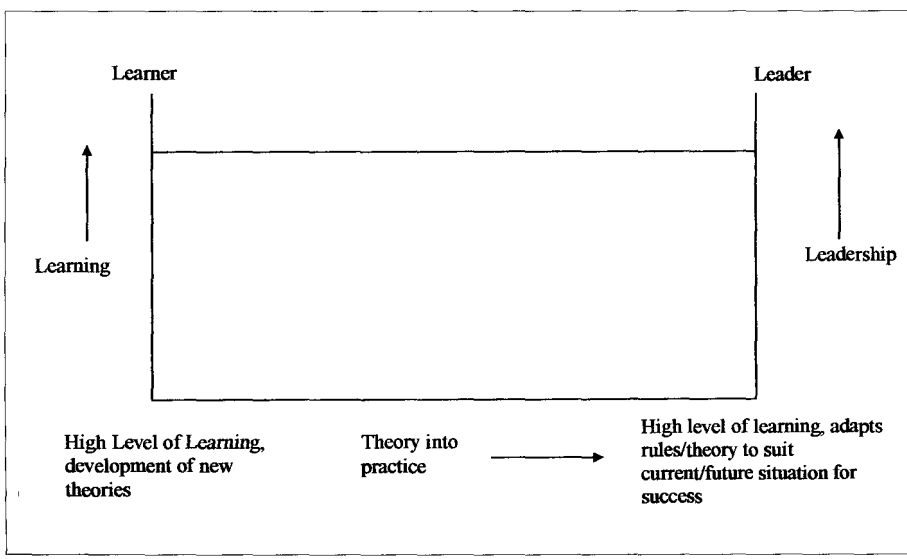


Diagram 2: The Relationship between Learning and Leadership.

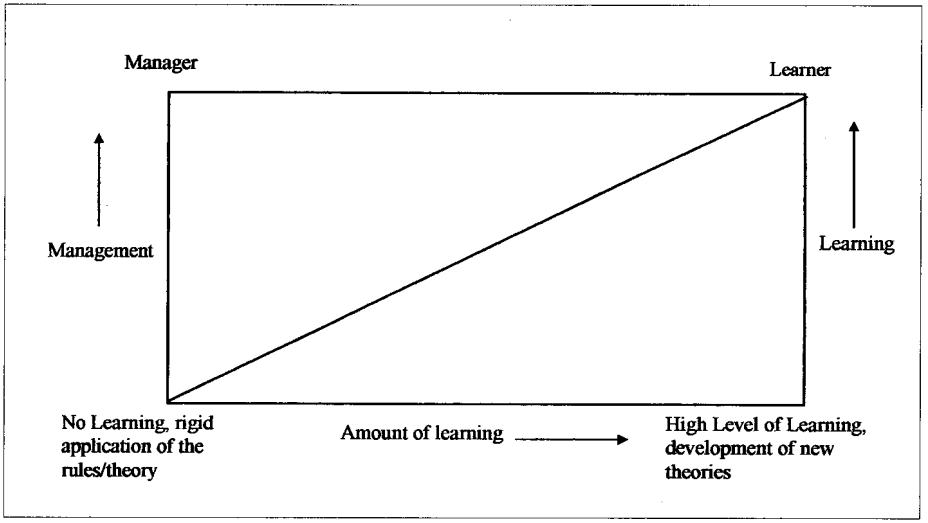


Diagram 3: The Relationship between Learning and Management.

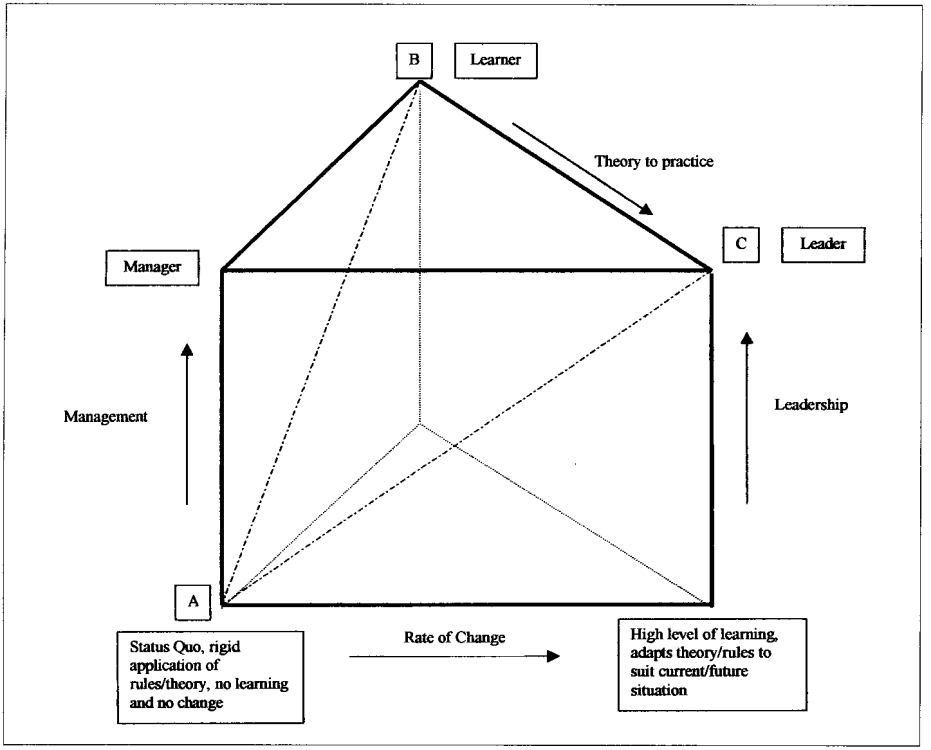


Diagram 4: The Relationship between Management, Learning and Leadership.

and to handle change successfully.

Are Management and Leadership Mutually Exclusive?

Some leaders will be successful in one situation but not another, so why is that? If we have natural leadership ability coupled with an intrinsic management aptitude and a proportion of learning then we will only be successful in certain situations where the particular quality in abundance is brought to the fore – the function of talent.

It could be argued that a highly effective leader is someone who is able to identify and apply the subtle blend of leadership characteristics and traits required in order to achieve success in differing situations. The same argument could be made of the highly effective manager.

In many instances the distinction is made that you are either a manager or a leader and cannot shift between the two. However, I have argued that it is possible for the brilliant manager and leader to shift the blend of their traits to achieve success. Someone who can shift between Leadership and Management to blend their subtleties achieving the greatest success in all situations is the truly brilliant *character.*

Summary

In the first part of this article I have argued that the defining element between management and leadership is change. A leadership style is distinguished from a management style by the ability to handle a higher level of change. The boundary between Management and Leadership is one of relative proportion, each possesses some of the other. A pure manager and a pure leader exist in theory only.

In the second part of the article the analysis has been taken a step further. I have attempted to discover why leaders are successful with handling change. In doing so I have identified that leaders learn from their experiences and use the theory/rules for guidance as they seek to make change to gain improvements, thus 'stretching' the rules. This 'learning' has added a third dimension to the leader/manager equation. It is the learning that drives change and allows the leader to practise and develop its implementation, such that it becomes a natural habit.

Finally I have questioned the mutual exclusivity of Management and Leadership, drawing on the first part of the article. I have argued that those who are successful in one situation naturally have the required subtle blend of each trait; the function of talent. I have then argued that those who are successful in many areas have the ability to move this blend of traits – both within and across the Management/Leadership boundary to match the situation that they find themselves in. Consequently it is not possible to draw defining boundaries around a manager and a leader – they are not mutually exclusive.

S. J. H. FOSTER
LIEUTENANT, RN

It's a Riot! – The Making of TV Hornblower

LAST spring I found out how to make (or not to make) a TV series on Mr *Midshipman Hornblower*. Judging by Admiral Liardet's comments in the Jan *NR* the series has already managed to upset some people, and, although an insight into life on the maritime film set may not put their minds at rest, it should at least make them smile a little.

Many years ago the late, great, Alan Villiers gave a talk in which he expounded on the trials and tribulations of a sailing ship master in film-making. He gave a graphic description of what it was like to be faced with the (often impossible) demands of the director while attempting to handle a ship that was crowded with people but singularly bereft of seamen. I little thought that one day I would find out that it was all too true!

The vessel was the *Grand Turk* and she had been constructed in Turkey to a design loosely based on a mid-eighteenth century warship. A full-rigged ship of 314 gross tons she was a substantial sailing vessel, and I was employed to drive her because the MCA had insisted on a master with proper STCW and square rig qualifications. For the filming we day-ran out of the little fishing port of Sesimbra, just south of Lisbon. Although she had participated in shooting the first two episodes out in the Crimea the previous autumn (a challenging experience by all accounts) she was still not complete in many respects, and thus only gained a very limited MCA clearance. She had arrived on station after a traumatic delivery across a stormy Mediterranean, in which the owners treated her as a powerboat and failed to appreciate the problem of headwinds. The result was that we only had a week to get her into shape and rig her for sailing.

She was very much a film ship. Below decks all authenticity ceased, and the space was largely taken up by stores and support facilities for the film unit. As a result all 'below decks' scenes were actually shot ashore. In many ways she was an extraordinary mishmash, avoiding true authenticity whilst signally failing to be easy to handle. For example the upper yards used authentic parrel ropes, rather than the later and more efficient saddle type trusses, and this made setting or furling those sails unnecessarily complicated. Needless to say this arrangement added nothing noticeable to the accuracy or quality of the film. The saga of her anchors was even better. The 'fake' was grossly oversize and hampered berthing, while her 'real' stockless anchor was too large to fit in the hawse hole, and forced us to fall back on the rigmarole of fishing and catting! The futtock shrouds were made out of (non-authentic) steel rods which were fitted at such acute angles that even the most athletic acrobats in the crew were defeated and forced to use (extremely awkward) lubbers' holes. To have a more modern rigging layout and yet manage to be both more awkward and less efficient than the original is no mean achievement. It should be no surprise that there were no rigging or sail plans, or that the boatswain's stores were virtually nonexistent.

Grand Turk mainly featured as the *Indefatigable*, notwithstanding the fact that she was based on a 20-gun sixth rate design of the 1740's, rather than that of a 38-gun fifth-rate (razee) frigate of the 1790s. To compound film illusion we had a different paint scheme each side to enable us to be either British or Spanish as warranted by the occasion! Illusion continued with some of the props. Thus, we had both balsa-wood belaying pins, and rubber swords and pistols for the fight scenes. Only the front ranks of the infantry were equipped with fully functioning muskets and bayonets, the remainder had to make do with rubber ones. Some of our cannons were fitted with tubes and could fire black powder charges, but they were fired electrically as this worked better than using slow matches (no gunlocks for us). We also had some fibreglass ones to use when the actors were pretending to transport the guns.

Authenticity was something of an obsession in trivial detail, and they did have the pre-1801 ensign and jack. However, the issued seamen's clothing included fancy buckled shoes with extraordinary built-up heels, which were quite impractical for working aloft. Most of us reverted surreptitiously to deck shoes or bare feet, but I doubt that anyone picked that

up from the resultant film shots. Normally I was in seaman's dress, because under sail I had to be around the wheel area. However, on one occasion I had to stand in for Capt Pellew, and found that uniform remarkably comfortable, although the pigtail hairpiece was a nightmare. Anyway the crew were highly entertained to see me rise from foremast jack to post-captain, only to be busted down again within a few hours.

As regards crew, I had five non-sailors (engineers, carpenters, etc.), and up to twenty-four deck hands. On deck it was something of a tower of babel, as I had two excellent Ukrainians (XO and Chief Bosun) from the barque *Tovarishch*, with whom I used a mixture of German/Russian and English, and twenty Portuguese. Although the latter had all served in the barque *Sagres*, rather less than half of them were genuine topmen, able to work in the rig, and none had any command of English sailing terminology. This language barrier included their interpreter, who was not a bilingual sailor but a German living in Portugal. The solution was to explain and identify key items to him in German, then for him to find out the equivalent in Portuguese, and finally for me to learn the more important of these. In due course the combination of gestures and mangled phrases worked reasonably well, which was fortunate as we soon lost the services of the interpreter. However, it was scarcely the homogenous team that one would have wished for when required to rig a ship in a hurry, and to go to sea without any time for training. This was particularly so as the Ukrainians were not available for the rigging, and only just arrived in time for filming. It must be said that female lib has a long way to go out there, and the Portuguese were visibly shocked to see my wife working aloft, and absolutely stunned to be outpaced by her up the rig.

At sea the total numbers could be as high as 150, what with actors, film unit, and extras (this was a legal limit). Just as Alan Villiers had warned, lots of bodies to get in the way, but very few to sail the ship. The film company would have loved me to sail with far fewer crew, while always expecting me to run the ship as if I had a trained crew of at least fifty.

For some reason the film people always referred to our ship as the 'Indy', which was a surprise. When the series came out this new nickname really confused one of my neighbours, whose British Pacific Fleet Carrier service led him to expect her to be called 'Indefat'. Actually they seemed to delight in inventing such curious abbreviations, and for them a Midshipman was 'M'Man'.

The film unit as a whole had a hierarchy and secret language every bit as arcane and complex as that of the Navy. In general the technicians and arts people were a pleasure to work with, particularly if you took an interest in what they were doing. Moreover, the fact that I was a Numast member created a good point of contact, and ensured a unified front in the inevitable clashes with the film company between safety and filming (safety always won). The Ukrainians found it hilarious to have the capitalist bosses behaving just as depicted in communist propaganda, though the sight of the officer class fighting the bosses did make them feel that somehow Marx & Lenin had missed out on the odd trick or two!

This brings me to the whole subject of management. The film company certainly had a wealth of producers, directors and assistant directors, heads of technical and arts departments, and accountants, but it seemed woefully short of any management or leadership skills. Although the director had been an apprentice in a very good shipping company, there were indications that had he continued in that career he might have had difficulty avoiding a mutiny. There was no attempt to encourage team-spirit on set and we worked in an atmosphere that saw several short-notice personnel changes.

I was only involved in sailing scenes, and in planning these they generally ignored their own very competent marine adviser, and never consulted me. It is something of a miracle that anything at all was achieved. Even to a newcomer it was clear that things could have gone more smoothly, and there is no doubt that any carrier operations officer would have had it running ten times better, while standing on his head. There was no flexibility, and the

shooting schedule with accompanying 'story board' ruled, regardless of wind or weather. Their equivalent of daily orders was the 'call sheet', which detailed who and what was to be where and when, and what scenes were to be shot, etc., and they also had the equivalent of a shortcast. However, this was a 'tablets of stone' planning system that only took account of how well they were doing with respect to the shooting schedule. The absence of practical considerations is shown by the saga of the towing sequence, where they would not take advantage of the long settled window of calms. The end result was not improved by their decision to tow French method with three individual boats with their own separate towing hawsers, rather than using the recommended British method where the boats were in line ahead with the largest one nearest the ship and bearing the load of the hawser. On the day it was like something from a 'Carry on' farce. Whilst this gave us all a good belly laugh, professionally it would have been nicer to have done it properly. On another occasion we were under full sail for a whole afternoon, while they filmed from a very slow power boat. For each pass we had to stop and hold ourselves in position with astern power, until they had caught up with us and got back into position. Then we had to kill the engines and try to regain steerage way in time to avoid hitting them. The director had no regard for the risks in going as close as he wanted, particularly as his vessel was dead in the water (for the sound recording) and unable to take any avoiding action.

In practice most filming was very boring as every scene was shot umpteen times from every angle, and much of the time 'under sail' was actually spent at anchor. However, there were always touches of humour, such as the often appalling lines, and the director's curious ideas about the normal deck activities on a busy warship (lots of rolling of barrels and much lugging about of chests). On the plus side both Robert Lindsay and Jonathan Coy had inherited a deep respect for the Navy.

Owing to our location almost all of the many extras were Portuguese, and their swarthy looks were obviously slightly at odds with their intended representation of British seamen or marines (even allowing for their being weather-beaten). This did not cause as much concern as the appearance of my excellent Afro-Portuguese topman. I had to point out that there were lots of black seamen around in those days, and as the navy had a black post-captain in command of a frigate by 1800 perhaps they should reflect that in the casting! It would be an imaginative move if they get around to filming *Lieutenant Hornblower*, as the West Indies station is where Captain John Perkins RN served, and it would certainly be good for the navy's new image. I nominate Morgan Freeman for the part of chairman of the board of inquiry.

Despite everything, whenever we had her under sail it was impossible to avoid enjoying the experience.

FRANK SCOTT

A New Doctrine or the Application of Commonsense?

Introduction

THE adoption by CINCFLEET of the NATO Standard HQ arrangements, reflecting doctrinally accepted functional areas, might possibly be taken forward with advantage to the arrangements of Departments at sea. This short article sets out the way in which shadow organisations might be applied within Command Capable Platforms at sea to enable the smooth transition of incoming staffs and so allow 'the best man to do the job'.

Background

With the reduction of Command Platforms in the early '90s and the consolidation of sea going NATO Commands about COMUKTG and COMATG a number of platforms were made Command Capable. Initially, this C3/CIS capability was taken forward for the four Batch III Type 22s but, subsequently, similar provision has been made for the Type II Type 22s, some Type 42s and a few Type 23s. In general, this enables the various different staffs to embark within a platform and to provide strategic battle management. To support the embarking staff, ship's staff are also taken up to augment the staffing functions within the engineering, logistics, communications, intelligence, operational and planning areas. Increasingly, the ship's staff are absorbed into the existing HQ framework provided by functional area.

Functional area responsibility

I believe that the current HQ staffing concept was arrived at by the US Army following their experiences in the American Civil War. Regardless of its initial inception, it has for long been adopted by the Army and for all NATO and, increasingly, National Headquarters, even to the lower Brigade levels. In the Royal Naval Context, all three Commandos work on a similar basis and have divided their responsibilities accordingly. Figure 1 illustrates the typical functional area breakdown adopted by most HQs and typically known as J or G Groups/Heads ie G4 Logistics. In some of the larger HQs, the Engineers form a separate functional area, G9, and the Legal and Political Advisers form separate entities feeding directly into the Command: in the smaller Commands, these are generally absorbed within either the G4 or G5 functional areas, as shown. In essence, by the division of responsibility one is aiming to ensure that the right staff report through to the Command through the right chain and, more importantly, that each function is represented. In the larger operational commands G3 OPS, G4 Logistics and the COS will be headed by 2 Stars with political advice coming in at a similar 'civil' level. The remaining Section Heads are then usually 1 Stars. They in turn will report to a 3 Star Deputy Commander and 4 Star Commander. In the NATO context the 2 to 4 Star appointments are much prized and, typically, are divided between the French, British, Americans and, increasingly, the Germans.

At the lower level, within Brigades or Commandos, similar divisions of responsibility occur with functional areas being headed by Majors and Lieutenant Colonels performing the same roles, albeit more tactically orientated.

Sea going responsibilities

Ships are still broken down by Departments and run by four to nine Heads of Department, aligned with the First Lieutenant and reporting to the Captain. In larger ships, tactical planning is delegated to the DHOD's. The Departments and HODs are presently recognised within QRRNs as shown in Table 1, opposite.

Functional alignment

Aligning these ship functions to those adopted by HQs and the Army is not immediately possible unless by responsibility, in which case the following readjustments are possible, see also Figure 2.

Taking the alignment further, one could see the First Lieutenant and 2i/c function being formalised within the Chief of Staff role or even divorced entirely so the First Lieutenant

Table 1

First Lieutenant/Executive Officer	Executive and 2 i/c.
Marine Engineering Officer	ME Department
Weapon Engineering Officer	WE Department
Supply Officer	S&S Department
Senior Warfare Officer	Warfare Department, when not represented by the Executive Officer.
(WINGS and, sometimes, AEO	Air and Air Engineering Department in CVSs/LPH)
(Amphibious Operations Officer	Within the LPD/LPH context)
(PMO	When a Medical Officer is borne)
(Chaplain	when borne)

Table 2

GI	Personnel and Admin	Executive: First Lieutenant/XO, Chaplain, when borne.
G2	Intelligence	PWO(CEW), Metoc.
G3	Operations	Senior PWO, WINGS, AOO and NO.
G4	Logistics, Engineering and Medical	SO, MEO, WEO, (AEO) and PMO
G5	Secretariat (Legal and Political)	Possibly by SO, MEO and WEO
G6	Communications	Tactical: PWO (CEW); CIS: WEO and PWO(CEW) and PIO as delegated, sometimes to the SO or WEO.
G7	Doctrine/Exercises	Executive Officer, Senior PWO, AOO and WINGS.
G8	Plans	HODs including Senior PWO/OPS.

becomes just that, heading G1, and the Executive Officer fits in as the Chief of Staff and 2 i/c. Interestingly, and take away the requirement for the 2 i/c to assume delegation for Command and Navigation, the Executive appointment could easily broaden to include non warfare specialisations. Revolutionary, perhaps, but the navigation and tactical fighting functions are not necessarily the war winners of today and as the Royal Navy moves away from FF/DDs and towards other specialist roles/shipping, the Executive/COS role might better be taken on by logisticians, Aviators, Amphibious (RM) Officers or even Engineers!

Shadow alignment

I have worked within both the traditional Departmental arrangements at sea and the functional area concept ashore and it is my opinion that the latter affords a better and more representative solution than the former. Whether this is taken forward for the management of our ships, or not, I do believe that we would do well to at least shadow align our Departments to the above structures both to better enable the Command Capable platforms to absorb incoming staffs and so that we fit more closely with shore commands, including CINCFLEET.

Conclusions

The recent move of CINCFLEET to include the engineers within N4 Logistics suggests that the moment might also be right to take the same approach to the way we do our business at sea. Certainly, as we move more and more towards jointery it makes increasing sense for us to adopt the same command functions now in common use, at all levels, by the other services. Not only does it make sense but I am also increasingly of the opinion that this type of soft re-alignment of the Departments will enable us to make best use of our limited manpower resources whilst providing us with flexibility for future changes to specialisations and roles.

ALSTON

Figure 1
HQ Functional Areas

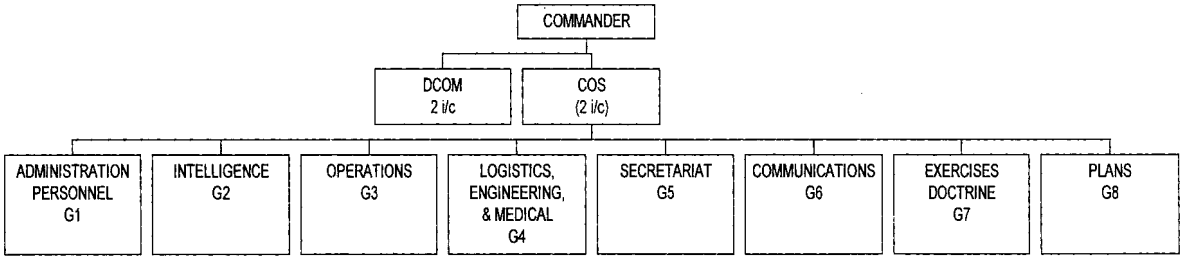
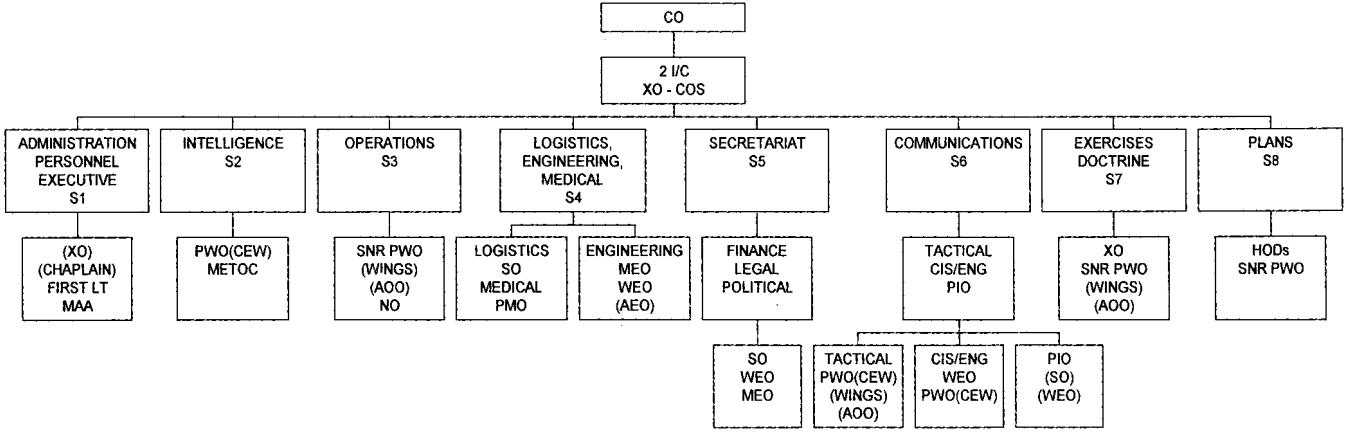


Figure 2
Ship Command Functions



The Future Aircraft Carrier

Introduction

ALTHOUGH I have been retired from the Navy since 1971, my excuse for writing about the projected new aircraft carrier (CVF), is that, nearly 40 years ago, in my first job as a Captain, I was the Assistant Director of Marine Engineering (Aircraft Carriers) [ADME(A)] in the Ship Department and worked for three years on the design of the ill-fated project for CVA-01. I think that many of the decisions we made then and the underlying philosophy are probably still valid today, even though the operational climate is vastly different. I am firmly convinced that, had we built two or three ships to this design, they would now be seen to have been the bargain of the century and they would have made the Falklands War a much less risky operation.

CVA-01

'Un peu d'Histoire' as they say in the Michelin Guide books. CVA-01 would have been a ship of some 53,000 tons displacement, about 6% larger than HMS *Eagle* and the fourth *Ark Royal*. It would have had three shafts, each of 45,000 SHP, with the machinery units arranged in combined engine and boiler rooms, along the lines of the Light Fleet Aircraft Carriers, an arrangement also used with great success by the USN for some of its WW2 battleships. It is worth remarking that the machinery was not to have been nuclear, as suggested by Cdr James (*NR*, Jan. '99). The three shaft arrangement and the combined engine and boiler room would have made both operation and maintenance a great deal easier than in HMS *Eagle* and *Ark Royal*, which had the ultimate in sub-division of machinery spaces into watertight compartments, so that both working the machinery and maintaining it were tedious in the extreme. This had been adopted in 1942, largely as a reaction to the loss of the third HMS *Ark Royal*, in November 1941, in sight of Gibraltar.

CVA-01 was, of course, designed to operate fixed wing high performance aircraft (of that time) and thus had a requirement for two 250ft steam catapults, capable of launching an aircraft weighing 60,000lb at 150 knots, with the direct acting water spray arresting gear for recovery. The plan required an aircraft complement 30% greater than HMS *Ark Royal* and *Eagle*. The new ship was to be both longer and wider than its predecessors, with a much greater maximum flight deck width, chiefly due to the provision of a 'Burma Road' outboard of the island, to allow re-spotting of aircraft without having to impinge upon the landing area. The overall length of the ship would have been 925ft, the beam 122ft and the flight deck maximum width 189ft.

The future Aircraft Carrier – basics

If we are to re-enter the fixed-wing, high performance carrier-borne aircraft field, I think that it would be *madness* of the first order not to make the ship fully compatible with the operation of contemporary American Naval Aircraft. This is fundamental to the whole concept, both because USN aircraft are usually much better than their British counterparts and because it would give us the opportunity to buy the aircraft ready made, fully up to date and with massive support available. I am old enough to remember the British Pacific Fleet of 1944-47, where one of the first things that was done when the ships arrived in the Far East was to replace the British aircraft with American. The *Avenger* and the *Corsair* were so much superior to the *Barracuda* and the *Seafire* that there was really no comparison and, with our limited resources, this is very likely to happen again. Also, on the single issue of cost, there can be no doubt that to buy fully developed aircraft from America would be vastly cheaper than trying to provide our own. If it were politically essential to manufacture in this country, no doubt that could be arranged – at a cost.

There are obviously, from the articles that have already appeared in the *NR*, possibilities of adapting RAF aircraft for naval use. My reaction to that is NO NO NO. Aircraft optimised for land based operation are hardly ever adaptable successfully for naval use. There is usually little or no saving in cost, by the time that the adaptation is done, partly because the numbers required are relatively small and also, technical compromises have to

be accepted that reduce the effectiveness of the aircraft when in naval service. The superficial attractiveness of going along this path usually results in unexpectedly high cost and, at the end, an aircraft that is not as suitable as it should be for Carrier operation.

Presumably, the vectored thrust aircraft is being considered. There have been many proposals over the years, but the only one to reach a satisfactory conclusion is the Harrier and that has limited future life. If the USN goes along this path, well and good, we can follow, but we would need to be convinced that they are fully committed, before building ships that *rely* on vectored thrust aircraft for their operational effectiveness. Free take off and landing does away with the need for catapults and arresting gear, but these two features are not major from the cost point of view, though they have to be specified from the start, because they affect the design of the ship.

Features of the ship

Damage control

I make no apology for putting Damage Control, in its widest sense, first. This is one of the essential features that differentiate a warship from a merchant ship. Since warships are required to put themselves in the way of danger, whereas merchant ships can always try to avoid it, it is essential to protect the investment in the warship by ensuring that it can, at least, survive action damage and, preferably, continue its operational role in the partially damaged state. This requirement embraces armour, watertight sub-division, duplication of systems, enhanced fire fighting capability and an internal communication system to control the situation.

Whatever may be said to the contrary, the building of two large Aircraft Carriers is a major project and the resultant ships are certain to be the largest, most expensive and most powerful units of the Royal Navy, for many years to come. They are therefore not proper subjects for skimping on the provision of damage control, as MEO proposes. Value for money is a good discipline, but it is necessary to ensure that the value required is obtained, however much or little money is spent.

A ship that has inadequate damage control provision is a sitting duck to attack and could very easily be lost, after a relatively minor hit by a hostile weapon. We have the example of the loss of the third HMS *Ark Royal*, from a single torpedo hit. The ship lost steam and had no diesel generators for emergency use, so the situation gradually got out of hand, until she sank 14 hours later. There was a design fault in the boiler uptakes, that caused them to fill with water and form a trap, where they passed round the edge of the lower hangar, as the ship heeled to starboard, so that it proved impossible to relight the boilers.

As the result of 1939-45 wartime experience, great prominence was given to all aspects of damage control and, by 1945, HM Ships were well provided and crews trained, but there were also a number of ships on the sea bed that need not have been there, had the damage control not, for whatever reason, been unable to deal with the situation. We neglect that lesson at our peril.

Propulsion

CVA-01 was to have had advanced, but conventional steam machinery, partly because of the power requirements for each propulsion unit and partly because of the need to supply steam for the catapults. Also, the use of gas turbine drive for large warships had, at that time, not been accepted fully. Now, we have expanded options.

The question of ship speed is critical. If it really is operationally necessary to have 31 knots on tap, with the ship at maximum displacement, 12 months out of dock and in the tropics (Deep, dirty, tropical), the power requirements might be very much higher. The power required to drive a ship through the water varies as the cube of the speed, so 31 knots requires a minimum of 36% more power than 28 knots. Also, gas turbines are particularly sensitive to temperature, so over-sizing might also be necessary, to ensure that required performance under adverse tropical conditions. Undoubtedly, this requirement would put two shafts out of contention and increase the size and cost of the ship, to accommodate the extra machinery power.

The maximum ship speed required for the

safe operation of fixed wing aircraft, using arrested landings, is the engaging speed of the aircraft hook with the arresting gear transverse deck span wire. This used to be 125 knots, but may be higher these days, if there have been further refinements in wire rope design; the speed depends on the tendency at higher speeds for the hook to carve through the transverse rope, instead of pulling it out. At the other end, the catapult can be sized in length to give any launching speed likely to be required of a naval aircraft, so that ability to launch is not rigidly linked to ship's speed.

Nuclear? As we all know, nuclear propulsion is the standard in our submarines and the USN has expanded its use to surface ships, outstandingly in the very large aircraft carriers that have been built over the last 20 years or so. Although I never worked in the nuclear field and therefore had no 'Need to know' what was going on, enough has reached the public domain to be able to say that it would be entirely practicable, from the engineering point of view, to equip the new generation of aircraft carriers with nuclear machinery. Whether we could use the existing submarine reactors, I do not know and have no idea of their output, but, surely, with about 40 years experience of designing such machinery installations for submarines, we could do so for a carrier.

It would not be out of the question to seek to buy suitable nuclear reactors from the United States and this would probably be the most cost effective way of obtaining them, seeing that we would probably not want more than four or, possibly, six and that to set up a design and manufacturing capability spread over such small numbers might well make the cost prohibitive.

If the cost aspect could be overcome, operational advantages would accrue. The removal of the need to replenish ship propulsion fuel at frequent intervals is one. When operational, an aircraft carrier has to replenish aviation fuel at frequent intervals too, but at least some of the propulsion fuel tank space freed by a nuclear power plant would be available for aircraft fuel, which would enable much more aviation fuel to be carried and extend the replenishment intervals. This might also enable the intensive operational period to be extended, so there is a lot to be gained from the operational point of view, to offset the undoubted problems of nuclear propulsion. Flexibility would be greatly increased, because the ship could transfer from one operational area to another at high speed and without needing to replenish propulsion fuel.

It is interesting to note that, in his well known paper 'Peace is our Profession', given by Vice-Admiral Sir Louis LeBailly to the RUSI, as long ago as 1963, he made the point that a nuclear propulsion system might cost less than at first sight appeared, by reducing the size of the Fleet Train required to support it and saving the cost of keeping the ship in propulsion fuel for its life time, a cost much inflated both by the quality of the fuel required for gas turbines and the additional cost of replenishment at Sea (RAS), that is the normal way of fuelling. Clearly, this aspect needs to be investigated anew, using contemporary data, to see how valid it is.

Inside the ship, the absence of uptakes and downtakes, both large for gas turbines, frees a lot of space where it can most effectively be used and disposes of the bane of funnel gasses drifting across the landing approach, to the benefit of the aviators.

Gas Turbines? CVA-01 was going to need 3 x 45,000 SHP, so a slightly smaller ship would probably need something of the same order, to give it 28 knots or so, if this is the minimum ship speed to operate fixed wing aircraft in no-wind conditions, it should be within the capability of four modern Gas Turbines. It would also permit the use of only two shafts, because modern propeller design has substantially increased the power that can be transmitted through one shaft. There is a penalty to be paid here, because a twin shaft propulsion system is much more vulnerable than three. Loss of power in one unit immediately takes out 50% of the ship's driving force. At its worst, this could result in the loss of all the fixed-wing aircraft in the air at the time.

Most of the aircraft carriers built as such for the Royal Navy have, in fact, been two-shafters. The Light Fleet Carriers and the

'Centaur' Class were all two-shafted, as are the three current ships; third *Ark Royal*, *Victorious*, *Illustrious*, *Formidable* and *Indomitable* had three shafts, *Indefatigable*, *Implacable*, *Eagle* and fourth *Ark Royal* had four. The earlier inter-war Carriers, converted from other types of ship, mostly had four, but only *Furious* survived the 1939-45 war as an operational ship. So, perhaps, the risk of building the new ships with two shafts would be acceptable, the only caveat being that none of the previous generation of two shaft Carriers suffered major under water action damage. The theory of 'Risk Assessment' could be applied in this field, to suggest the optimum layout of machinery.

Electric propulsion would be attractive, as opposed to gearing, provided that the motors could be mounted in the space available and this would also allow the integrated system described in the 1999 *Broadsheet*, to be used, but this is so irrespective of the method used to generate the power.

Diesels? Diesels are used universally in new merchant ships, from the smallest harbour craft to the largest tanker and bulk carrier. They are very attractive because of their fuel efficiency, the large, slow running engines turning in an energy conversion ratio, from fuel in to power out, in excess of 50%, which no other method of propulsion can approach and an engine producing 50,000 SHP is on the market. But, the engines are huge, particularly in height and very heavy, so they are not suitable for warships, even the largest.

The medium speed engine, of which the Pielstick is the market leader, is used extensively in passenger ships, where it has a very good reputation, but, again, it is a bit large and heavy to be attractive for warships, though a 30,000 SHP unit is not out of the question.

The unit size available in the high speed diesel would entail a relatively large number to produce the power needed for the new Carrier and this would undoubtedly prove to be a heavy maintenance load, so, though in some ways attractive and much in fashion at present for smaller warships, it seems hardly practicable for a large Carrier.

Conventional Steam? Steam held sway, especially for large ships, until the 1970s, when the large diesel overtook it in merchant ships and the gas turbine in warships. However, it is still there and has the advantage that it can meet the power requirements with ease, but it has always been complicated to operate, requiring large numbers of skilled men – in my opinion, needlessly so and poses a heavy maintenance load. For an Aircraft Carrier, it has the major advantage that the slotted cylinder catapults can be fed directly from the propulsion boilers, but this should not be quite so dominant in future as it has been in the past. I do not suppose that any Marine Engineer, having become accustomed to running gas turbines, would willingly return to conventional steam.

Flight deck machinery

Catapults and arresting gear went out with fixed-wing, non-vectored thrust flying, though still, of course, used by the USN and the French Navy. When I was working at Farnborough in the early 1950s, it was an article of faith amongst the aircraft designers and developers that nothing should be carried by the aircraft that could possibly be put on the ground or in a ship. The extreme of this philosophy was the rubber flexible deck, which was proved practicable as a method of recovering aircraft – at least as far as the Vampire was concerned – but was abandoned when the implications of recovering and handling an aircraft without an undercarriage on airfields were fully investigated. But catapult launching and transverse wire arresting gears have stood the test of time and can contribute to the optimum aircraft, particularly in the vital aspect of operational endurance.

The 'Water Spray', direct acting arresting gear, developed by RAE, Bedford, was seen in Britain as definitely the way forward as regards recovery of aircraft, though much work remains to be done on the system of retraction and resetting. As far as could be seen at the time that further development was abandoned, it was fully capable of recovering aircraft, of any weight, up to the fundamental limit of engaging speed of the transverse wire on deck.

The slotted cylinder catapult that was being developed for CVA-01, was specified to launch an aircraft weighing 60,000lb at 150 knots; there appeared to be every prospect of success at the time the development was stopped. However, this design depended on a copious supply of steam from the ship's main boilers for its operation, the technique used in the USN and the French Navy to this day.

The question of how to power the catapult is made difficult by removing its source of steam supply. It is quite possible to envisage using a solid or liquid 'monofuel', of which the most familiar is cordite, that will dissociate in a controlled manner to release a great deal of energy over a short period, but these are all inherently dangerous. There are lots of 'Two phase' rocket fuels, of varying inherent danger and there is air, which can be compressed away from the site of use and used in the same manner as steam in the catapult. The problem here is that this is not a safe operation, because it is possible for highly compressed air, in the presence of oil to 'Diesel' – explode – with devastating results. The USN experienced this in their former hydraulic/air catapults, where they allowed the air and the hydraulic fluid to come into contact. The British design kept them apart by means of a piston.

So, at the time when I last worked on this problem, which is admittedly a long time ago, the logical conclusion was to use the 'Wet Accumulator', such as was fitted in *Eagle* and *Ark Royal*, towards the end of their time. This works by having what is, in effect, a large boiler steam drum, close to the catapult, about half full of water and with steam on top. During operation of the catapult, steam is released from the water, so that the fall in pressure is much less than it would be in a receiver that contained only steam and the performance of the catapult is enhanced. This gives a way of escape for powering the catapult, because the steam pressure above the water in the accumulator depends only on the temperature of the water, in thermo-dynamic terms, its 'saturation temperature'. Thus, in principle, it should be possible to return the steam pressure to the required level between aircraft launches, by a bank of immersion heaters. It might well be necessary to fit several generators to provide the quantity of power over a short period (some 20 to 30 seconds) to do this, but it is a way out of the dilemma of how to power the catapults with steam, in a ship that is not steam propelled. Other variations could be considered, for instance, a secondary accumulator that is continuously heated and whose contents could be passed quickly to the main catapult accumulator, to regenerate it between shots.

It is interesting to read in part 2 of Commander James's article 'Carrier 2000' that the electric linear motor is once more being considered as a serious rival to the slotted cylinder catapult. It has the undoubted attraction that it converts electric power directly into thrust and has been considered a number of times in the past. The technology then available resulted in two factors that led to its rejection, the first being the weight and space occupied by the windings, high up in the ship and right forward, where they face regular dousing in sea water and, secondly, the problem of how to supply them with the electric power required. This needs a large amount of closely controlled energy to be applied to the aircraft, over a period of two to three seconds. Since electric power must be generated as it is used, the problem of matching the output of the generators to the catapult requirement was, in those days, insuperable, though the development of computer controls might make this less of a problem.

The ship itself

Those of us involved in the design and specification of CVA-01 were frequently accused of 'Gold plating', by our London-based colleagues. Certainly, we had to try to meet all the requirements, which were many in a new ship of that size, in addition to the basic one of rating as an operational base for aircraft. The principal argument, as always, was the amount of self-defence capability that should be built into the ship. The fourth *Ark Royal* and *Eagle* had twin 4.5" air/surface turrets, mounted with their crowns at flight deck level and it is inconceivable that nothing should be fitted in any new ship, even though this may well have to be at the expense of

some convenience in handling aircraft.

The Fleet Carriers from *Illustrious* of 1939, to the fourth *Ark Royal* of 1954, all had armoured flight decks, which proved their worth in the Pacific, when struck by Kamakaze attacks, but the price paid in aircraft carried was horrendous and, with the side armour also fitted, went a long way to explaining why our Carriers could operate so many fewer aircraft than their USN contemporaries, which were notably short on protection. This brings acutely into focus the problem of how much protection it is worth while building into the new ship and what is the price to be paid, both for doing so and not doing so. A most sophisticated exercise in risk assessment is necessary to sort that out.

There are bound to be many claims on space by 'Outside Interests'. For instance, is the ship to be capable carrying a sizeable party of Royal Marines (or Soldiers), for use in situations where a presence ashore is required; and how much aircraft maintenance is to done on board, taking space both for the men and the equipment and spares on board needed to do it?

Finally, as I write this, it is reported in the Press that the new French Fixed Wing Aircraft Carrier *Charles De Gaulle*, has a flight deck that is too short for the effective operation of the American naval aircraft that have been bought for it. This is the sort of pitfall into which we would be wise not to fall!

Command and control

The island in CVA-01 was going to be huge and to weigh about the same as a destroyer, in order to provide space for the sophisticated Command and Control systems of the day. Subsequent miniaturisation of the electronics should enable modern equipment to be crammed into a smaller space, but there is still the philosophical problem of deciding what the new ships are to be capable of doing in this field. Traditionally, the larger the ship, the larger the control and command systems. No doubt this aspect was fully considered in the Strategic Defence Review. However, if the ship is to be more than just a carrier and operator of aircraft – a mobile airfield – then a great deal of Command and Control equipment will be required, both to control aircraft in the air and to run the landing and initial operations phases of any amphibious activity. I doubt very much whether it would be practicable to split these two functions into different ships, although that was done in the Falklands, bearing in mind that, in the limit, one person, the Operational Commander, has to bring together all aspects of his operation and make the critical decisions.

Conclusion

It is now almost 40 years since the last Aircraft Carrier built to operate high performance (for their day) fixed-wing aircraft, HMS *Hermes,* was accepted into service in November 1959 and everyone involved in that ship at that time is now retired. So, the people given the task of specifying and designing the new CV(F) will have the advantage and challenge of starting with a completely new blank sheet of paper. Since all warship design is a balancing act, I hope that they manage to keep their balance.

D. J. I. GARSTIN
CAPTAIN, RN

Singapore and Malaysia 30 years on

OLD Far East hands tempted into making a nostalgia tour, as we recently were, may appreciate an update. For better or worse most of the Singapore we knew and loved has disappeared under a sea of high rise flats, industrial estates and the diverse buildings seen as essential to modern living. The urban sprawl encompasses much of the city state but the buildings are attractive and well laid out with green spaces so the overall effect is pleasing. Gone are the small shops, to be replaced with air conditioned shopping malls often sporting names which would be familiar to anyone living in the UK or USA. Fortunately, except in the smarter places, the old sales techniques are followed and haggling has the usual impact on price.

The hawker stalls no longer fringe the bus station but are to be found in the basements of shopping malls. You can stuff yourself on Malay, Chinese or Indian delicacies for about £3 a head in a scrupulously clean environment. Indeed cleanliness is to be found everywhere. The city centre is spotless and the suburbs hardly less so.

Unlike many countries in the post colonial era Singapore has capitalised on its past rather than sought to forget it. Street names are unchanged, even though their appearance is radically altered, and the grander colonial buildings round the Padang are still impressive when compared to the adjacent skyscrapers. However the memorial to the Indian National Army, torn down shortly after the War, has been reinstated; a sure sign that history is more than just the bits of which the colonial power approved.

One of the most noticeable features is the age of the population. Over half appear to have been born since the departure of the British military and there is only limited recollection that we were ever there after the war. There is a strong feeling of statehood and considerable pride in the country's phenomenal economic success. English is the lingua franca and spoken by almost everyone. In Malaysia, by contrast, the insistence on Malay as the only medium for teaching has resulted in an apparent reduction in the numbers able to conduct a conversation in English. Even in the major tourist areas conversation could be difficult though everyone had a smile and a 'hello'. My rusty Malay came in handy on several occasions.

In Singapore there is none of the poverty which was apparent in the colonial era. The shops are filled with quality goods and the young smartly dressed in the latest fashion, including the almost obligatory telephone glued to their right ear. Small areas of the old city have been preserved (in a slightly sanitised way), notably in the Chinese and Indian quarters where you can still find the occasional open monsoon drain.

You would hardly know there had ever been a major naval base. Admiralty Road, where once the dockyard police lurked on unlit motorcycles to catch the would be Stirling Moss, is now a fast dual carriageway flanked by industrial estates. There are still a few of the old buildings on Canberra Road and the entrance to busy Sembawang Shipyard is little changed since it served as the dockyard gate. HMS *Terror* survives, in good condition and largely unchanged except for the loss of the golf course, as Sembawang Camp and is used by the Singapore Navy as a training centre. The ground floor of the CPO's mess has been converted into a naval museum. Mainly this covers the Singapore Navy since 1965 but there are interesting souvenirs of the dockyard, HMS *Terror* and the early days of the Malayan RNVR. The visitors' book revealed a trickle of former RN personnel, whose visits were obviously appreciated by the curator. Further west KD Malaya and MBJ stand abandoned since the RMN moved to Lumut. There are museums at Changi, Sentosa (formerly Blakang Mati) and Fort Canning, all with information about the military aspects of WW2.

The best way of getting around is by public transport which is cheap, clean and regular, unlike ours at home. An 856 bus from Sembawang MRT (roughly Chong Pang) runs down Canberra Road, Admiralty Road and through to Woodlands. A round trip from the city centre is about £2 which is remarkable value for travelling in air conditioned comfort. The MRT had some imaginative naval recruiting adverts.

Cross the causeway into JB and the picture is very different. Change aplenty has come, but much more slowly leaving life in many ways just as it was. Costs are significantly lower than Singapore. B&B for two is £25 in most hotels and you can get a hawker's lunch for just over £1 per head. Serious efforts are being made to attract the tourist, though we heard few British accents amongst the European groups. Two weeks' car hire (an air conditioned Proton Wira) was a modest £475 for unlimited mileage (we did 3,000km) and the North-South motorway makes for easy travel.

The old part of Malacca is now a heritage centre and boasts a maritime museum. The RMN has its own museum as part of the complex but, like its Singapore equivalent, says little about Confrontation or the period during which many of us served on loan. Much of the material seems to date from the 1980s. In a remarkable feat of engineering, which included digging a canal, the RMN has put KD *Sri Trengganu*, one of the earlier Vosper patrol craft, on display. Standing on her deck brought back a veritable flood of memories from the time I drove a sister ship. Malacca is no longer a lighterage port but there is a thriving trade with Indonesia. At the close of the millennium it is strange to be able to see cargo being loaded by hand across a shaky gangplank as it has been since the port was founded.

Fraser's Hill was greatly changed. The rest house at the Gap is one of the few remaining in their original form and served us a traditional tea while we waited for the one way system to turn in our favour. On arrival we found the resort dominated by new hotels and apartment blocks as well as an extravagant new golf and country club. Sadly the Bishop's House is derelict and looks not to have been used for several years. The woodwork is rotten, the ceilings collapsing and the jungle reclaiming its own. This is surprising as, without exception, all the other houses are well cared for, often by corporate owners. The old RNTC has been taken over by the Malaysian military and was undergoing a major facelift. Admiralty Bungalow was also in good nick but what connection it had with the RN I don't remember. Perhaps it was for C-in-C's use but no doubt some members have the answer.

Generally the west coast is taking the brunt of the development. There are tall buildings, business parks and construction sites all over the place. Cross to the east and life is much more as it used to be. There has certainly been development but without the brutal scars left by the rush to look like any other country in the world. In Kelantan, in particular, everything runs at a slower and more agreeable pace. Sitting on the beach under a coconut palm looking out over the South China Sea I shut my eyes and distinctly heard Sue Lawley ask which eight records I wanted. . .

Penang is now reached by a 13km causeway and there are plenty of new buildings. Much of Georgetown is unchanged and with its predominantly Chinese population closely resembles the Singapore of old. The museum gives a good account of the island's history and it was nice to see both the CofE and RC churches, together with the 19th century cemetery in good nick.

Road travel in Malaysia is dominated by the swarms of Honda C70s which transport up to four people and goodness knows what else. One wonders what the insurance companies say. Although the roads are vastly better the standard of driving isn't. I slipped back into my old habits with embarrassing rapidity. Petrol was 18p per litre. The larger motorway service areas have restaurants and the smaller ones resemble a French aire.

A few practical points. We travelled in March/April 1999 when the exchange rate was a favourable RM6 and S$2.78 to the pound. All hotels and filling stations take credit cards and there are numerous cash dispensers in the towns and sometimes in motorway service areas. Other than booking a return air ticket we had made no specific plans and made up our itinerary as we went. We seldom booked ahead and had no problem in getting accommodation even on holiday weekends. Most of the country is covered by mobile phone networks but the cost is even higher than at home because of the surcharge levied for the roaming facility. The familiar 13 amp plug is still in universal use so recharging

batteries or running the hand held PC on which this was written is no problem. The Rough Guide, some leaflets from the tourist office in London and a decent map constituted the navigation portfolio. If any member would like further information, please get in touch.

They say nostalgia isn't what it used to be but you certainly won't be disappointed, except by the price of Tiger, if you go back. Change is gathering pace so don't delay too long. Selamat jalan!

DAVID FROST
COMMANDER, RN

'Thank You' – After Fifty-Seven Years

HMS *Hermione* sank 17 minutes after she had been torpedoed. It was half past midnight on 16 June 1942: the anti-aircraft cruiser was on convoy escort duties in the Eastern Mediterranean. The ship's company, that included a Royal Marine band detachment, numbered 560 and they had been at 'Action Stations' for the best part of three days. The convoy had been attacked by enemy aircraft, torpedo-armed fast patrol boats and submarines, with the threat of a surface battle group, led by two battleships, operating in the area.

Everard Mallinson was in command of the for'ard Transmitting Station (TS), several decks below the waterline, when the torpedo struck on the starboard side aft and almost immediately the ship started to heel to starboard as water rushed in. The order came to abandon ship. He got all of his crew out of the TS and started to climb the ladders to the upper deck, closing the hatches as he went. Gaining the upper deck of a now severely listing ship, which was also settling down by the stern, Mallinson was scrabbling ineffectively in his attempt to get up and over the port guardrail but could find no purchase. It was dark, there was little starlight and visibility was further reduced by smoke drifting on a light breeze. Unexpectedly a hand came down and heaved him up allowing him eventually to reach the rail but, once there, Mallinson could see no sign of his rescuer in the immediate vicinity. Lightly dressed and wearing only an inflated rubber ring lifebelt he slid down the ship's side, lucky to avoid the bilge rail! After nearly an hour in the water he was picked up by one of several escorts searching in the dark for survivors and taken to Alexandria.

The *Hermione* Association was formed in 1983 and re-united about two dozen members of the former cruiser aboard the 'Leander' Class frigate HMS *Hermione*. The Association meets annually and its numbers have grown since this last ship to bear the name was decommissioned in 1992. In 1998 another member of the Association passed Mallinson a series of articles from *The Blue Band* Magazine, the journal of the Royal Marines Band Service, written by ex-RMBX 1559 (Musician) Max Nicholls, about his time (15 months) in the cruiser. The last article had the following passage '. . . I helped Lieutenant Mallinson (of the Ack Ack TS) to negotiate a tricky passage to the other side of the ship. As it happened, though, this officer was not amongst the survivors.'

After a series of false starts Mallinson, earlier this year, managed to trace his rescuer. Letters and telephone calls followed and Max Nicholls joined the *Hermione* Association in time for the two of them to meet at the annual reunion in Kendal on 15 May, for the first time since their parting in the Mediterranean as the ship went down. Few, if any, members knew of this dramatic story until Mallinson stood up to give a vivid but straightforward account of the events of that night. He read the passage from Max's article and pointed out that thanks to that helping hand in the dark he was indeed amongst the survivors and so with a suitably engraved ship's crest was able to say 'Thank you for saving my life 57 years ago!'

R. HOWELL
COMMODORE

A Fringe of the Fleet

AMONG the thousands of RNVR officers involved in the 1939-45 war there were a small proportion who never went through *King Alfred* and never served as ratings before being expected to serve, and behave, as officers. They were moved into active service as quickly as possible because of their technical knowledge, and largely had to acquire the authority and habits of an officer as they went along.

I was one of this number, and wore the dull green stripe of the Electrical Branch, in which as far as I remember the RNVR were mainly involved with Double L minesweeping and asdic maintenance. Radar specialists, who had probably read physics at university, wore the brighter green stripe of the Special Branch, which also covered such people as interpreters – a move presumably intended to conceal the existence of radar.

Although I was 18 in 1941, my active service in the war started late. My specialised subjects at school were maths and physics, and by the time that I left school in 1942 the Government had realised the need to keep up a supply of technically qualified people in an increasingly scientific war, and were offering State Bursaries giving two years for free at university to read a scientific subject. So I read engineering for two years, and came down from university having successfully taken the degree exams in June 1944.

In that year, people who got first-class exam results had to go into industry. Those who like me were second class had a choice of REME or RNVR. I had been a warship enthusiast since I was a small boy, and had no difficulty in making my choice. I got through the Admiralty interview, despite the recurrence of a stammer which had bothered me occasionally over the years, and was appointed Probationary Temporary Electrical Midshipman RNVR, to work as an Anti-Submarine (A/S) Maintenance Officer.

A month after D-Day, two of us who had become friends in the University Naval Division met at Waterloo Station and travelled down to Portsmouth to report at RN Barracks. It is a very odd feeling wearing the uniform of a naval officer, however lowly, when you have never seen the inside of a naval establishment. At least a year in the University Naval Division had got us into square rig every Sunday and had taught us how to march Naval style, and to salute. We had also learnt to pull a whaler, which was a considerable change from my weekday activity of rowing in a racing eight with sliding seats and hollow oars.

It was the saluting which proved immediately useful, as we seemed to spend a good deal of time on the journey saluting everyone with a stripe on their arm, and returning salutes from ratings, hoping to conceal the fact that the green stripe on our arms was not the only green thing about us.

Our service started with the Officers' Divisional Course at Portsmouth Barracks, which lasted a month and attempted to turn a bunch of technically qualified people, some from universities and some from industry, into acceptable naval officers. It gave me the opinion that the naval petty officer is a marvellous man, and much superior to his Army counterpart whom I had encountered at school and in my first year at university, but I couldn't help wondering why we spent half a forenoon learning about anchors and cables, which none of us would ever get involved with again!

Portsmouth Harbour was of course virtually empty, and my only other memory of the course – apart from passing out flat on my back on the parade ground when I had an armful of jabs – is that we were regularly told that we should have seen it the previous month, when the invasion fleet was still in. But we hadn't, and that was that.

At the end of the course my friend and I, both destined to maintain asdics, were sent up to HMS *Osprey*, the A/S school, which had been evacuated from Portland after bombing and was at Dunoon on the Clyde. Our course there lasted three months, and then we were sent out to work.

My appointment was to Greenock. The Port A/S Office was in the railway station at Prince's Pier, the terminus for the old high-level line from Glasgow. In our office the beer pump handles were still mounted on what had

been the bar, but unfortunately there was nothing connected below.

Our patch extended upstream to the Prince's Docks in Govan, where frigates and similar-sized ships were docked, and downstream past Greenock and Gourock as far as Ardrossan, on the lower Clyde, where a small shipyard had a little dry dock which would take corvettes and was quite the smelliest dock I have ever had to clamber round.

Opposite Prince's Pier a tripod mast stuck out of the water and provided a good perching place for cormorants. This was the Free French destroyer *Maille Breze*, sunk when one of her torpedoes was accidentally discharged, slithered along the iron deck and hit the break of the forecastle. Further out, just far enough from the Tail of the Bank to give swinging room, was X Buoy. This was normally occupied by one or other of the four passenger liners then doing the Transatlantic troop run – *Queen Elizabeth, Queen Mary, Mauretania* and *Ile de France.*

During that winter of 1944 the Clyde Escort Force consisted of five escort groups, Nos 7, 8, 17, 18 and 31. They mostly berthed up to three deep along the line of berths in Great Harbour, Greenock, with others inside the pier at Gourock, facing the RAF Sunderlands moored in Cardwell Bay.

The 'Flower' class corvettes had to be different. They retreated to Albert Harbour, a little fishing harbour in Greenock, where they got together in a sociable huddle.

Escort Groups 7 and 8 were virtually identical in make-up, each with an odd mix of types of ship. The leaders were Wild Bird class sloops (*Lark* and *Cygnet*), and each had a B class destroyer (*Boreas* and *Bulldog*), one or two old V and W class destroyers (I think *Verity* and *Whitehall* were among them), some frigates and 'Flower' class corvettes. There must have been some reason for this mixture, but I never found it out.

EG 17 and EG 18 consisted of frigates, 'River' class 'Colony' class and the new 'Loch' class, while EG 31 was all 'Castle' class corvettes.

PA/SO Greenock was an Electrical Lieut-Cdr RNVR. Under him was a Lieutenant and a bunch of Sub-Lieutenants and Midshipmen like myself, and Petty Officer SDIs (Submarine Detector Instructors). The division of labour was that the officers looked after the escort vessels with their up to date asdics on which we had been trained, while the Petty Officers looked after any big ships in the Clyde, including asdic-fitted merchant ships.

The system that we worked was that we each had our 'own' ship in each escort group, so that ships normally had the same maintenance officer each time they came in, someone who knew the set and what had been done to it before. It was a sensible system, and worked well. There was a junior officers' mess in huts in the garden of a large house which the Navy had taken over, and a lot of shop was talked in the evenings. Any new defect discovered was immediately known to everyone, and this certainly saved time when it cropped up somewhere else.

The Petty Officers' responsibilities normally included any carriers working up under Flag Officer Carrier Training at Largs, where they could anchor inside Great Cumbrae Island. During my time at Greenock there were three light fleet carriers going through – *Venerable*, *Vengeance* and *Glory*. I was once sent to check the asdics on one of them which had just arrived, and was told by the Officer of the Day that he didn't think they were fitted with asdics! Eventually an SD rating was found, and I was led along interminable alleyways and down numerous ladders to the asdic directing gear compartment.

The asdic domes then in use had to be housed at speeds over 18 knots because water noise rendered the set useless, and so the larger warships seldom used them. But they were in fact fitted with a set which had two oscillators, the after one being tuned to a low frequency which made it sensitive to the noise of torpedoes. In use, this was kept rotating continuously to give warning of a torpedo attack, while the forward one could be operated in the normal manner.

Things were very different in the escort vessels, where everyone knew all about their asdics, where they were and what they did. By

the time I arrived on the scene, the majority of them were fitted with the 144Q main set and 147B depth finding set. The Type 144 introduced automatic 5 deg. stepping, thus giving an accurate sweep up each side of the ship without holidays, and carrying out each sweep in the least possible time. The Q attachment was a small oscillator fitted below the main oscillator which produced a vertical fan-shaped beam, and allowed contact to be maintained with a deep submarine after it had passed below the main beam as the attacking ship ran in.

(I am using the terminology that I grew up with. If you came on the scene later, for asdics read sonar, and for oscillator read transducer!)

Corvettes and other ships which had a top speed below 18 knots had Type 143 instead of Type 144. It was identical except that the dome could not be retracted into the hull. With both Types 144 and 143, changing a damaged dome was normally a docking job, popular with the ship's company because of the possibility of leave.

In theory the Type 143 dome could be changed while afloat. It could be lowered down from the ship from inside on two wires, and brought inboard by means of a strop permanently secured to the dome and brought up over the side of the forecastle. This was not a job that I ever had to attempt, thank heavens, and I imagine it could only be done in deep water. Otherwise the new dome might arrive in position half full of mud and the odd tin can.

Type 147B produced a horizontal fan beam which could be tilted downwards. Used in the later stages of an attack, it gave a slant range for the submarine coupled with the angle of tilt, and these were ingeniously combined by mechanical methods in the recorder so that it read directly in depth, and the correct depth could be passed to the depth charge crews or set on the ahead thrown weapons.

The oscillator was long and narrow, and was usually called the sword. It could be mounted forward of the main set because the fact that it was narrow meant that it caused no serious interruption to the main beam.

For a lot of our ships, Type 147B had been added after construction. Immediately forward of the main directing gear compartment was normally the chain locker, and a small compartment was cut out of this to take the 147B. One 'Flower' class corvette which I visited had the set mounted actually inside the locker, with only a metal screen forward of the set to keep the anchor cable off it. It says a lot for the robustness and watertightness of British asdics that the set ever worked.

The Clyde Escort Force provided escorts for the Russian convoys, and a number of swords were snapped off while in the lowered position by impact with ice, and had to be replaced on return to Greenock. This was a relatively easy job. With what was left of the sword was drawn up into the housing, a valve across the bottom of the casing could be closed from within the ship to maintain watertight integrity, and the oscillator unit with its control column could then be hoisted up into the directing gear compartment.

The next step was to withdraw from the unit the inner tube that rotated to control the tilt. With the small compartment in the converted ships there was no room to do this, and you had to intrude on the engine room fraternity by moving the operation up to the stokers' mess deck immediately above.

This was where the 'Loch' class frigates and 'Castle' class corvettes scored. They had been designed to take 147B, and a spacious directing gear compartment accommodated both the main set and the sword, and provided enough room for the job by laying the sword diagonally across the deck between the two sets.

Indeed ample space between decks was a feature of these ships – a feature which was possibly unique. When I visited the post-war frigate *Yarmouth* in which my son served as an engineer officer in the 1970s, I was shattered by the comparatively cramped conditions.

Greenock had none of the 'Captain' class frigates – American destroyer escorts sent to us under Lend-Lease – but we did have some 'Colony' class ships. This was an unusual class, ordered from an American shipyard by the Admiralty before Lend-Lease got going. The design was based on our 'River' class, but thoroughly Americanised. They were welded

instead of riveted, and electrical power for ship services was 440 volts AC instead of the British 220 volts DC.

Having AC electrics gave our 'Colonies' one advantage. Because there were few of them, when they came alongside and shut down their boilers, the base could provide ample electrical power from alternators on the quayside. This was not true for British-built ships. The DC generating capacity available on shore was not enough for the maximum number of ships that might be berthed, and sometimes DC power had to be rationed. This always seemed to me to be particularly hard on ships' companies which had just returned from Russia.

The disadvantage of the Colonies was that welding a design intended for riveting caused vibration problems. Riveted joints can adjust themselves to stress in a way that is not possible with welding. I had one 'Colony' class frigate among the ships that I normally looked after. Once, early in 1945, I had large chunks of her asdics spread about on the deck when we heard that an escort carrier had been torpedoed in the lower Clyde and any available escort vessels had to sail at once.

The ship was available apart from my activities, so we scrambled everything back, checked that it worked, and she sailed in a hurry. We heard later that as soon as she got into the danger area she broke down, and was left stationary!

All British-built ships had direct current electrics – alternating current didn't come in until the 'Daring' class destroyers after the war – and in the case of corvettes and other small ships it was only 110 volts. For equal voltage, direct current doesn't give you as serious as shock as alternating current. It was said that old torpedomen used to check whether the power was on by licking two finger tips and putting them on the terminals concerned. Personally I preferred to use a voltmeter.

At Greenock we experienced the war at secondhand, through our 'own' ships. What brought the reality of war closest to me was when the corvette *Bluebell* was torpedoed and sunk on the Russian run with only one survivor. She wasn't one of my ships, but I had serviced her once when the Sub-Lieutenant who normally looked after her was on leave.

To me, *Bluebell* seemed a lovely ship and a happy ship. The HSD in charge of her asdics obviously knew that the name bluebell referred not only to a flower but also to a brand of metal polish. All the brass components in the directing gear compartment had been scraped clean of paint and polished until you could see your face in them, and the whole compartment was spotless. We were very quiet in the mess on the day her group got back to Greenock.

After Greenock my next appointment was a brief one to Chatham Dockyard before joining a destroyer flotilla, and what a change that was! We were refitting ships for the Far East at a comparatively leisurely pace and we messed in the Barracks Wardroom, with no battledress to be worn in the evenings and a mess dinner every Thursday night. Suddenly, Greenock and the war seemed a long way away.

IAN BREMNER

The Loss of HMS *Victoria* – an Eyewitness Account

MY Great Uncle Sub-Lieutenant Gerald H. Welch, who was serving in HMS *Nile* at the time, wrote the following letter. The punctuation and capitalisation is as in the original.

'We had gone right up to the coast as far as Tripoli, and arrived off there at about 3.15. It was Thursday afternoon, and Thursday afternoon is devoted to making and mending clothes. No other work is done. That goes on till about 3.45. We supposed the Admiral did not want to disturb everyone earlier than that by anchoring so we went on a little. The fleet was in two lines. The *Victoria* leading the starboard line. the *Nile* second and *Dreadnought* third. The *Camperdown* led the other line with the *Edinburgh* second. The signal was made — Starboard line turn 16 points to starboard. There were 11 ships, six in one line, five in the other. The distance between the lines should have been twice the number of cables that there were ships in the line, i.e. 12 cables. The lines were six cables apart. We were going about 8.5 knots. I will draw a diagram – *there follows a diagram showing how the* Victoria *should have turned outside the* Camperdown *and what actually happened. There is a W against* Victoria *and a D against* Camperdown.

'Now as I said, the signal was for the lines to turn 16 points inwards, *preserving the order of the fleet.* Markham signalled "I do not understand your signal", but apparently understood afterwards.

'Now the question comes, did the Admiral intend the ships to turn round as W & D. The *Camperdown* line was on the Admiral's port beam. Therefore after turning in any direction or doing anything, *to preserve the order of the fleet*, the line must still be on the Admiral's port beam at the end.

'Captain Noel one of the smartest and best men in the service did not think it meant that, and I do not think any of the other Captain's thought so either.

'Doing that, the *Camperdown* would have to keep on the Admiral's port side by rule of the road, i.e. inside him, so that supposing the Admiral meant to go between the lines as it is now supposed, he would turn round and go right across the *Camperdown*'s bow. Personally I think that is what the Admiral did mean. If so, Markham was quite right as far as I can see, because he followed the rule of the road and he carried out the signal as it was made, though very likely not as it was meant.

'I was down below having tea when we suddenly began to go full speed astern. We jumped up not knowing what was on and looked out of the port. The *Dreadnought* was right alongside us and we thought she had nearly rammed us and we were going astern to clear her. But just then a fellow who had gone on deck rushed down and said the *Camperdown* had rammed the Flagship.

'There was a rush for the upper deck and we found ourselves barely 20 yards from the Flagship's stern and the *Camperdown* just getting out of the hole she had made. Our skipper had a very strong suspicion of what was coming, because directly the signal was made he gave the order "Close watertight doors". We got out on the Flagship's port beam and immediately began hoisting our beam boats out. But the signal was made "Negative send boats". So everybody hung on and watched. We could see them trying to get the collision mats out, but apparently could not. The bow was going down inch by inch until it reached the figure head. The stern was rising and she was beginning to heel slightly to starboard. The water crept up and up on to the fo'c'sle – the bow going down and down until the jackstaff forward was only a little above water — then that was down. The water went on and on and reached the battery doors. Then Tryon put the engines to full steam ahead to run ashore. There was a rush of water into the battery doors. She heeled over. Men began to jump from the quarter and it was perfectly horrible to see. The port screw was out of the water, the stern being very high out of the water and the ship having a tremendous list to starboard.

'The poor fellows jumping from the quarter could not see the screw and several were caught by it as they went down, whirled round and round and then flung against the ship's side and rolled into the water. It was sickening.

'Crowds of men collected in the awning aft. All the ship's side – port side, was lined with men. She had turned right round then and we were on her starboard beam. All this time (a very short time) the water was creeping up the side till it reached the 6-inch gun ports, these it swept in and suddenly came over. There was an awful row then. Guns rattling round, everything falling about, 3lb, 6lb, 6-inch, 10-inch and machine guns flying across the deck. Some going overboard and some wedging themselves into different places. Over she went with a crash. The keel came up, then there was an explosion, the boilers burst and the bottom split, partly I suppose with the boilers bursting and partly with the pressure of air. Clouds of steam came up. That cleared away in a second and we could see scores of men on the keel. Some diving off – some running about – some clinging on. Everybody rooted to the spot, fascinated, struct dumb. She remained like that an instant, the screws going slower and slower and then down she plunged, the screws still going round as they touched the water.

'For an instant nobody moved — nothing was heard on board us. Then somebody sung out "boats" and there was a stampede, men jumping over each other head over heels into the boats, they were lowered and away in far less time than it takes to write it. All round the spot were quantities of wreckage, while in the centre was a seething mass. Great bubbles came bursting up and now and then a spar came up with a rush end on — jumped almost out of the water and came down with a splash. Our great fear then was that our boats would get into the centre and be sucked down because the suction was still so great when the boats arrived that it is believed any boats would have gone down. We could see but very few men — nearly all were then under water. Scores of boats were on the scene and going back to the ships loaded from time to time.

'The *Dreadnought* saved most — 97, I think, we were next — 84. Altogether 292 were saved out of about 698, so that about 400 men went down with her. They do not know exactly how many were there because all the books are lost. Of course it is very easily found out from the Admiralty. There was one poor fellow had both legs broken, another had some ribs and an arm. One boat came up bottom upwards, one of our cutters turned it over and found a marine underneath, drowned of course. It was something horrible. All this time nobody was thinking anything about the *Camperdown*, but when we did look at her she was well down at the bow — we were rather afraid that she was going to do the same thing. We stayed there about three hours picking up whatever we could which was very little indeed. We had the Captain on board. I never saw a man so broken down. He did not know how to stand nor which way to look and always had his hand over his face on deck. Down below he sat all day long with his face buried in his arms and I don't believe he ate anything at all.

'The next day they had the funerals. One man died on board us in the morning and the fleet paymaster died on board the *Phaeton*. There were altogether seven to be buried I think it was. The *Camperdown* arrived at Tripoli all right. She had full steam all night and a slip on her cable all ready to run ashore. Nobody on board her would turn in. It was touch and go with her all that night. We left the *Barham* and another ship out there to look after anything that might turn up. The depth was 73½ fathoms. The next night ie Friday, we fell in just before sunset and the *Sans Pareil* with the Admirals flag at half mast fired a salute of 17 minute guns. Then all the bands played the Dead March in Saul and the flag was slowly hauled down reaching the deck just as the sun disappeared over the horizon. Then there was a silence for a minute, then the disperse was sounded all over the fleet and everybody went away. It was most impressive and made one feel very sad. We remained about there after that but nothing could be done of course. I hung on in the *Nile* till Sunday afternoon when I was sent here (HMS *Phaeton*) at an hour's notice.

'We brought a lot of survivors down to

Malta, and the *Edgar*, the rest leaving Tripoli on Monday morning. I only knew very few fellows on board the *Victoria*. Three went out with me in the *Achilles*. Cayley who was saved unhurt. Gillett who had his head cut a bit was saved, and Smallwood who had a tremendous cut across his stomach. How he was saved I cannot think. I went and saw him yesterday at the hospital. I think he is getting better now, but he had a very narrow shave. Of course there has been a fearful lot to do since then, taking statements of saved men etc. I came here because there were two lieutenants short, so that I am doing Lieutenants duty now, besides getting ready for my exam. I have got 96 sights to get in and the skipper is always hunting me about them and never gives me a minute to write a letter if he can help it. This is partly why I have been so long writing this. I have sat down to it I suppose eight times altogether. They have got photos here of the *Victoria* upside down just as she was going. I have ordered one but have not got it yet, will send it as soon as I get it. There was one man saved who walked through the hole in the bow. The bow went in eight feet just before the turret and the ram about 15 feet, killing several men and injuring some. One midshipman was sick with fever and was barely strong enough to walk. He was taken on deck but was not saved. Another one named Scarlett was washed down the funnel. The funnels came off just before reaching the water and of course there was a tremendous rush of water into them. He was washed in and went down in the funnel.

'The mast-head man was in the top, as she went over he clung to the gun in the top, feeling that go, he caught hold of the sail round the top and just before reaching the water, jumped. He was saved. It seems perfectly marvellous to me how some of them were saved. The man with both legs broken for instance, the lieutenant of Marines, Farquharson saved a lot of people. He was not hurt at all. He swam about and when he saw anybody near him sinking, dived down and brought him up and gave him a spar or something to hold on to. A boat offered to pick him up but he said he was all right and there were a great many who needed picking up a great deal more than he did. They were all awfully shaken as you may suppose. They will talk of nothing else. You lead off with something else because it cannot be a pleasant subject to them but they always bring it back to the *Victoria* disaster some how or other.

'I made a clerk we picked up named McClean honorary member of my chest and lent him a few shirts, collars, trousers etc, to go on with. He lived on my chest till I left, of course all the survivors were honorary members of somebody's chest, and everybody was anxious to do all they could for them.'

My great-uncle passed his exam later that year and became a professional navigator. He retired from the post of Cdr N to Vice Admiral Chas J. Briggs, Commanding the 4th Battle Squadron, in HMS *Dreadnought* in early 1914.

ANDREW WELCH
COMMANDER, RN

Gladstone, Greenwich and the New Naval College

IN December 1868 William Gladstone was returned to power as Prime Minister and as one of the two members of Parliament for the constituency of Greenwich. His was a ministry committed to reform, particularly the overhaul of institutions – the Civil Service, the judiciary and the military – all of which were subject to considerable change. While the Army is probably more widely identified in this respect, it should be noted that there was also a naval agenda, the bulk of which was designed to yield a series of financial savings. For Gladstone, despite the fact that many of his Greenwich constituents were in Admiralty employment, the Navy continued to be a target for economising zeal and he determined to accelerate the pace established by his Conservative predecessors. His choice of First Lord of the Admiralty, directed to reduce the naval estimate below £10 million for the first time in a decade, was the enigmatic and temperamental H. C. E. Childers.

Childers had held a previous Board appointment in 1864/65 when, as Civil Lord of the Admiralty, he had overhauled the finances of Greenwich Hospital – the ancient charity for distressed and infirm seamen. Admissions were dramatically reduced and instead, payment of out-pensions provided an incentive for inmates to live elsewhere. This measure both extended the benefits of the charity to an increased number of men, and also dramatically reduced the number occupying the building. The result was that when Childers returned to the Admiralty in 1869, Greenwich Hospital was an easy target for closure. Also caught up in the prevailing climate of retrenchment were the Royal Dockyards at Deptford and Woolwich, which Childers shut at the cost of what his biographer termed 'immense unpopularity and the most violent and bitter abuse'.[1]

Not all Childers' reforms were based on reductions. He also introduced a significant revision of officers' retirement arrangements, reforms of the promotion system and significant improvements in education and training – one of which was to establish a committee to review the state of higher education in the Royal Navy, and consider the establishment of a new naval college. This group, led by Rear Admiral Charles Shadwell, consisted of three naval officers and three civilians who produced a restrained, rather conservative vision of higher study.[2] Their proposed curriculum was exclusively and narrowly technical and clearly devised with the object of achieving practical improvements in professional knowledge. The staffing levels and equipment provision were similarly modest, with the Committee envisaging a new institution teaching only between 60 and 70 students per year – a tiny fraction of an officer corps whose active list in January 1870 consisted of nearly 300 Captains, 400 Commanders and in excess of one thousand Lieutenants and Sub Lieutenants.[3]

The only question to divide the Committee related to the site of a new college and whether the existing institution at Portsmouth, or the newly vacant buildings of Greenwich Hospital, might best be utilised as a centre for naval education. This deceptively simple question saw the naval members arguing strongly and unanimously in favour of Portsmouth and the civilian element resolute that Greenwich afforded the best location.

The respective arguments were to some extent indicative of a general difference in philosophy towards the purposes of higher education in the Service. The naval lobby saw the essential element as the practical application of improved knowledge, and to this end Portsmouth was, they felt, the ideal choice. It was only in the Dockyard, it was argued, that the relationship between higher study and its practical consequences might be observed. Only at Portsmouth could officers –

> study all improvements and [can] witness all trials and experiments that take place from time to time. They have access to all the factories and workshops; they have the opportunity of visiting and inspecting foreign vessels of war calling at the port. They are in constant contact with the service afloat, and with the society of Naval officers of all ranks, which necessarily elicits much professional discussion of a useful and critical character.[4]

It is implicit in this argument that higher education was principally a form of vocational training. The naval members of the Committee were content to argue that it was not the primary aim to make naval officers 'able mathematicians or scientific experts', but rather to assist them in 'acquiring varied knowledge, which they can afterwards utilise and employ for the benefit of the public service'.[5]

Predictably, the case for Greenwich was argued from a different angle. The belief here was that the first and essential requirement for a new college was the high quality and superior character of the teaching staff. London clearly offered significant advantages, for it would be possible to obtain 'lectures and practical instruction by gentlemen eminent in the scientific and literary world which would be quite unavailable at the distance of Portsmouth'.[6] The civilian members foresaw the establishment of an academic community at Greenwich, with the Hospital quarters being used as residences by distinguished staff, and thus a higher standard teaching being provided at a similar or lower cost than the south coast alternative. Further, the ancient connections with the Royal Navy, which dated from the mid seventeenth century and were epitomised in the magnificent Painted Hall of the Hospital, were seen as entirely appropriate to a seat of naval learning.

The utilitarian argument was not completely dismissed from the Greenwich case but was interpreted in a rather wider context. The Thames and Medway, it was claimed, actually offered superior facilities for the study of naval architecture, ship building and steam, and further the proximity of the Royal Artillery and Royal Engineers at Woolwich, Chatham and Shoeburyness gave special facilities for the study of gunnery, torpedoes and field fortification. The London site thus offered a unique opportunity for inter-disciplinary study and the facility for naval officers to mix socially and professionally with 'scientific civilians and the scientific corps of the army'.[7] It was thus envisaged that students studying at the new College would derive positive benefits from associating with the wider scientific community offered by the capital city.

No consensus was achieved and the matter was referred to the Admiralty Board for a decision. The relative advantages of the two sites were advanced in a constructive and considered manner and, depending upon the particular perspective applied to higher education in the Service, both had their merits. What was quite clear, however, was that while the issue divided the Committee nicely along service/civilian lines, the case for Greenwich was not based on any substantial opinion expressed by witnesses. Of the 16 persons examined only two supported the Greenwich case and of the 56 written submissions only five were in favour and some positively hostile to relocation. Many considered Portsmouth 'self evidently superior' and 'better for obvious reasons', with one senior officer 'greatly surprised that a proposal to move the Naval College should ever seriously have been made'.[8] In the light of subsequent events, it is important to stress that such views were common, and while the case for both sites was presented as a fine balance, Greenwich was overwhelmingly less popular with those giving evidence.

It was also considerably more expensive – a point that supporters of the Greenwich case were always prepared to concede. No estimates are included in the Report, but a note of the disparity between the respective sets of running costs does exist in personal papers of Rear Admiral Tarleton, appointed Second Naval Lord in May 1872. Here it was recorded that the annual cost of the College at Portsmouth over the previous years had averaged some £6,785 per annum, while the expenditure for running a higher education establishment at Greenwich was estimated to be in excess of £31,000 per annum.[9] It is clear that a move to the old Hospital was not only less popular with the Shadwell witnesses, but would represent, at a time of stringent naval economy, a considerable increase in the scientific vote.

The Shadwell Report was issued on 8 July 1870 and apart from a brief parliamentary debate which concluded without a division, was consigned to internal Admiralty

administration. Little activity followed – probably because Childers, the original architect of education reform, left office in March 1871 and thus some urgency was removed from the reform process. His successor, George Goschen, while a wise and skilful administrator, was immediately embroiled in a series of incidents that shook public confidence in the Admiralty and gave him a baptism of fire.[10] Yet, while these factors may help to explain some administrative delay, they cast no light on why, in the face of overwhelming naval opposition the decision was finally taken to found the new College at Greenwich, or indeed why, at a time of unparalleled naval economy, this more expensive option should receive government support.

To explore this question further, it is necessary to return to Gladstone and in particular to delve into his increasingly difficult relationship with his Greenwich constituency. While the Prime Minister had commanded considerable local support in the early days of his government, this had soon evaporated – not least because the naval retrenchment so close to the Liberal cause had devolved to a significant degree on his own constituents. Gladstone remained strangely unsympathetic to their hardship and dismissed numerous town delegations with homilies about the national need for reductions in public spending. 'None of the interest in the unemployed which had been shown in the 1860s', notes H. C. G. Matthew, 'was bestowed on dockyard workers who had lost their jobs.'[11]

By the late summer of 1871, although he had spoken as far afield as Aberdeen, Whitby and Wakefield, Gladstone had still to address a local meeting in the constituency. In September a meeting of the town's Advanced Liberal Association expressed confidence in the Prime Minister only by means of the chairman's casting vote and it was clear that his local support was ebbing away.[12] Despite the need to consolidate the constituency organisation, Gladstone was only finally persuaded to address voters towards the end of October. It was a prospect he faced with some trepidation – his Cabinet notes revealing that on 27 October 1871 he invited 'contributions and cautions' from colleagues as to a forthcoming speech at Blackheath.[13]

What his notes do not show, is that he received a reply that day from George Goschen, First Lord of the Admiralty, who shared his leader's concern as to 'What I would say in your place as to the discharge of government workmen at Woolwich and Greenwich, if I had the unenviable task of addressing a Greenwich audience.'[14] Goschen suggested that Gladstone should employ the 'usual' arguments about the national need for reduction, but acknowledged that 'I am unable to see how you can satisfy local feeling on the point.'[15] However, in his concluding paragraph he offered his leader a lifeline, by suggesting that the empty buildings of Greenwich Hospital should be the site of the new naval college.

This was an audacious suggestion on a number of grounds. First, it will be noted that the question of a future location for the new college had been before the Admiralty for more than 12 months. Despite constant demands for action from the Service press and Portsmouth MPs, no detailed consideration had transpired and now Goschen was advising his leader to settle the matter, without further consultation, the following day. Second, it was quite apparent from both the press and the Shadwell evidence, that the strong body of naval opinion was against Greenwich and in favour of Portsmouth and thus the decision would be seen as taken against 'expert' advice. Finally, and perhaps most significantly, it was clear that, while the Gladstone administration had placed reduction before any other aspect of naval affairs, by choosing Greenwich they would be selecting what had been privately acknowledged as the overwhelmingly more expensive option.

These factors do not seem to have perturbed Gladstone whose speech the following day, before an audience of several thousand fully incorporated Goschen's suggested mollification. After some difficult opening sentences, during which he was heckled, Gladstone raised the subject of Greenwich Hospital and 'the questions connected with

that truly national building.[16] Claiming that the matter had been under the careful attention of the First Lord of the Admiralty for many months he promised 'to apply the hospital to a purpose which will be satisfactory to you and to the country' and to 'revive and renew the traditions of the glorious profession with which from the first it has been connected.'[17] Nothing more of local interest was included and having offered a sop to local feeling and quashed interruption, Gladstone spoke on a series of national issues for a further two hours, in what has been described as one of his greatest oratorical efforts.[18]

The matter was subsequently discussed in Cabinet, with Gladstone's diary entry for 30 January 1872 noting 'Greenwich Hospital to be made centre of naval education',[19] although he took no further interest in the scheme and did not speak in the constituency again until the next election, some two years later. The expediency of the decision however was clearly of concern to the political members of the Admiralty Board who, throughout 1872, demonstrated an evasive and disingenuous approach to the subject when pressed in the House. For example, on 13 March a small committee led by the Second Naval Lord was appointed specifically 'to consider and arrange the details of the Establishment of Greenwich Hospital for education'.[20] Yet in the House of Lords on 3 May the Earl of Camperdown, who was a member of that committee, emphatically denied that the choice of location had been settled. Under heavy pressure from the Portsmouth lobby he concluded the debate with the assurance that the matter was 'still under the consideration of the First Lord of the Admiralty'.[21]

More obfuscation followed in August in a late night sitting on the Naval Estimates, within which the costs of establishing the College were included. The fact that this discussion had been long delayed may itself have been a political ploy – certainly the *Broad Arrow* thought so, commenting that 'the postponement of the Naval Estimates until the fag end of the session is no doubt a very convenient method of avoiding full discussion' and that it was 'now a favourite course with the Admiralty'.[22] Whether this was so or not, Goschen's claim in the debate that he had been informed that 'after careful estimates £10,000 would cover the whole transformation of Greenwich'[23] did not accord with the findings of an internal Admiralty Committee which had reported confidentially on 29 June, that more than three times this amount would be required.[24] 'The whole matter' concluded the *Broad Arrow* 'teems with circumstances of grave suspicion'.[25]

Sir James Elphinstone, one of the members for Portsmouth and a vigorous supporter of retaining the College in the dockyard, forced a division, claiming that opting for Greenwich was 'a political ruse for the purpose of doing something for that constituency',[26] and that the Vote for 'New Works, Buildings, Machinery and Repairs', within which the new college was included, be reduced by £10,000. Government support held firm, however, and the amendment was rejected by 99 to 64. Thus the establishment of the educational institution in the splendid surroundings of Greenwich Hospital, which had been determined privately between the Prime Minister and his First Lord some ten months previously, was finally assured.

The fact that as the *United Service Magazine* bluntly commented 'there are few naval officers who, if consulted, would not unhesitatingly give Portsmouth the preference'[27] and that the decision to do otherwise was 'unquestionably due to the fact the Prime Minister is member for Greenwich'[28] did not of course disqualify the many arguments in its favour. The location close to the capital meant that it could attract high quality staff and there were increased opportunities for contact with a wider scientific community. Perhaps most significantly the vast range of empty wards and offices in the Hospital, which at its peak had accommodated more than 2,000 men, offered considerable potential to expand the modest proposals of the Shadwell Committee – particularly in terms of the numbers of staff and students.

To some extent this happened and there is evidence that the political imperative in the decision to move to Greenwich was exploited by its supporters on the Shadwell Committee –

in particular by Joseph Woolley. As Admiralty Director of Education he was a key member of the working group tasked with the detailed arrangements for the establishment, and they produced a much expanded view of what the new institution might achieve. By the time the College opened for study in February 1873 student numbers had increased from the 60 recommended by Shadwell to more than 200, with a consequent increase in teaching staff. The profile was also changed with provision for private students and officers from foreign navies. Perhaps most significantly for a navy in the midst of a technological revolution, there was an increased representation for engineers and naval architects – symbolised by the integration into the College of the Royal School of Naval Architecture.[29]

Yet in other ways the expediency of the decision to establish at Greenwich, against the preponderance of naval advice, implied longer term difficulties. Despite the scale and grandeur of the surroundings it was clear that many senior officers felt the location to be unsatisfactory and too far removed from the practical elements of the Fleet. Remarkably the foremost of these was the man chosen as the first Admiral President of the College, Sir Astley Cooper-Key. An implacable opponent of extending the benefits of higher education across the whole officer corps, Cooper-Key had already testified to Shadwell as to the unsuitability of the Greenwich location. In 1872 he appealed unsuccessfully to Goschen for another appointment, noting that leadership of the new institution was 'not a position I should have sought for or that I consider myself fitted.'[30] Not surprisingly his years in office, crucial in shaping the new establishment, were characterised by a series of disagreements with the Board as to the nature and purpose of the institution, and in particular what Cooper-Key termed 'the quasi-civil character of the appointment of its officers'.[31]

So general was this discontent with the Greenwich location, that the Admiralty Board were faced to rely on a number of staff intimately involved with the new college who were already on public record as favouring the Portsmouth alternative. These included not only Cooper-Key but his successor Admiral E. G. Fanshaw. Other opponents included Admiral Shadwell, author of the original report and third President, Admiral Tarleton who had led the Committee making the detailed arrangements, and two members of the Greenwich professional staff, J. K. Laughton and J. B. Harboard.[32] The passage of time did little to alter the view that the higher education of naval officers should be conducted within an essentially practical environment. Fully 30 years after its foundation Admiral Fisher was still proclaiming the unsuitability of the location and the 'want of naval reality about Greenwich College which reacts detrimentally on every officer who studies there'.[33]

In an attempt to counter the disparity between theory and practice of which Fisher and others complained, the College adopted a philosophy which was both conservative and exclusively rooted in technical and material matters. While it undoubtedly taught to a high standard, the institution never attempted to interpret its role in the wider content, which promoted not only the acquisition of knowledge, but also the development of broader and more divergent thinking. Thus, despite the efforts of mathematics lecturer J. K. Laughton to introduce naval history, which he taught in a voluntary capacity, it was never highly valued by the College authority. His successor, Admiral Colomb, complained that so many restrictions were placed upon him that his lectures were virtually useless.[34]

Similar sentiments applied to the subject of International and Maritime Law of which the Shadwell Committee remained deeply suspicious – only Admiralty produced textbooks were to be employed in order to counter the 'doubtful views and unacceptable decisions (which) still prevail'.[35] Of wider operations there was little. It was not until 1900 that any consideration of tactics and strategy was introduced, via the Senior Officers' War Game and even this had a limited life span, for in a resounding echo of the original debate it was transferred in 1905 to Portsmouth, in order to become 'more practical'.[36]

The enduring problem was that for most British naval officers of the period, advanced study was inextricably linked to practical application. They were enthusiastic proponents for 'useful knowledge' – early victims, as Nicholas Rodger has suggested, 'of the modern craze for a relevant education'[37] – and thus the latest exciting naval developments were always approached from an exclusively technical viewpoint. The fact that the preferred option of a college co-located with a Royal dockyard had been denied did not prevent, indeed it positively encouraged, a syllabus which exhorted officers to know rather than to think.[38]

Nevertheless, the foundation of the Royal Naval College Greenwich undoubtedly represented a major advance in higher education provision. By almost any measurement – numbers of students, staff, administrative and technical support, range and content of courses – it constituted a step change over facilities in Portsmouth. Yet it is equally clear that the reorganisation was less than total and that the most powerful navy in the world remained remarkably cautious and defensive in its approach to higher education. Despite the provision of first class facilities and the injection of considerable finance, it is evident that the sense of confidence that under-pinned, for example, initial officer training was lacking. Thus the early years at Greenwich were almost inevitably condemned to faltering progress and a highly restricted view of what might be achieved. In accounting for this, a range of cultural and professional matters are relevant, but the expedient nature of the College foundation, which saw the wishes of the Service overturned and large sums of money expended primarily to consolidate the Prime Minister's constituency power base, constitutes a curious and previously unconsidered factor.

H. W. DICKINSON

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[1]S. Childers. *The Life and Correspondence of H. C. E. Childers*. Vol 1. (London 1901). p.169.
[2]Committee on the Higher Education of Naval Officers (*The Shadwell Report*) Public Record Office, Kew, England (Hereafter cited as PRO) PRO ADM 116/9/185.
[3]*The Navy List* (corrected to December 1869).
[4]Shadwell, op cit (xix).
[5]Ibid (xx).
[6]Ibid (xxi).
[7]Ibid (xxi).
[8]Ibid. p.98.
[9]*Tarleton Papers* Microfilm section, Liverpool Central Library, Reel 5/10, MSS 164.
[10]Within months of Goschen taking office, the battleship *Agincourt*, then the largest British warship afloat, was negligently stranded in broad daylight and clear weather on Pearl Rock, Gibraltar. This, together with an incident when the troopship *Magaera* was run aground and found to be unseaworthy, provoked a storm of protest concerning the condition in which the Admiralty allowed ships to proceed to sea.
[11]H. C. G. Matthew, *The Gladstone Diaries* (Oxford 1982) (xxii).
[12]For a further explanation of Gladstone's difficult relationship with his Greenwich constituency see: Geoffrey Crossick, *An Artisan Elite in Victorian Society* (London 1978).
[13]Matthew, op cit p. xcii.
[14]Goschen to Gladstone 27 October 1871, *Gladstone Papers* MS 44161 (British Museum, London). This letter is clearly important both in explaining Gladstone's relationship with his constituency and in demonstrating that the decision to establish the new College at Greenwich was primarily motivated by political expediency. Its significance has not perhaps been previously appreciated because the letter has been mis-filed in the Gladstone collection at the British Museum under correspondence for the following year, and thus its chronological significance has been lost.
[15]Ibid.
[16]A. Tilney-Bassett *Gladstone's Speeches – A Descriptive Index and Biography* (London 1916) p.402.
[17]Ibid.
[18]Ibid.
[19]*Gladstone Papers* Diary 30 January 1872. MS 44640.
[20]First Report of the Committee appointed to consider and arrange the Establishment at Greenwich Hospital for the Education of Officers of the Royal Navy (*The Tarleton Report*) PRO ADM 1/6235.
[21]*Hansard* 3rd Series, Vol CCXI (1872) c.180.
[22]*The Broad Arrow*, 10 August 1872 p.172.
[23]*Hansard* 3rd Series, Vol.CCXV (1872) c.180.
[24]*Tarleton*, op cit.
[25]*The Broad Arrow* 10 August 1872 p.172.
[26]*Hansard* 3rd Series Vol CCXIII (1872) c.286
[27]*United Service Magazine* Part One 1973, p.343.
[28]Ibid p.342.
[29]There was, however, little social integration. Executive and Engineer Officers maintained separate messing facilities until 1887. See G. Dawson *The Story of Greenwich* (London 1997) p.93.
[30]P. H. Colomb. *A Memoir of Cooper-Key* (London 1889) p.394.
[31]PRO ADM 203/1.
[32]Not until 1891, with the arrival of Admiral Sir Richard Hamilton, did a senior officer who had previously declared himself in favour of Greenwich become head

of the institution.

[33]Fisher's solution – 'The whole College should be transferred to Portsmouth and the Palace of Greenwich leased to some large body like the London County Council, which would pay a high rent for it'. Dawson, op cit p.97.

[34]Dawson, op cit p.93.

[35]Shadwell, op cit p.xvi.

[36]Dawson, op cit p.95.

[37]N. A. M. Rodger. 'British Naval Thought and Naval Policy 1820-1890' in C. L. Symonds (Ed) *New Aspects of Naval History* (Annapolis USA 1981) p.148.

[38]Ibid.

Arctic Enigma

IN January 1941, arriving at Scapa fresh from sub lieutenants' courses, I found myself Gunnery Control Officer in HMS *Somali*, Tribal class destroyer and Leader of the Sixth Flotilla (Captain Clifford Caslon CBE). With the spotting rules so recently exercised at Whale Island still fresh in my mind, I could not help wondering how *Bismarck* would look from the director sight but as it turned out my only surface targets were to be two small trawlers.

At that time (and indeed until the revelations of Group Captain Winterbotham) the existence of Bletchley Park and its activities were known only to a very select few who certainly did not include junior naval officers, many of whom in consequence may have been involved in seemingly routine operations which actually had a deeper significance. In fact early 1941 was something of a turning point in the 'intelligence' war at sea because, in spite of earlier successes in respect of the German air and surface forces, up to that time it had hardly been possible to read the naval Enigma. This situation only changed after the capture of papers and other items from some German ships. Two of these were the *Krebs* and the *München*.

Operation Claymore[1], the first Lofoten raid, took place on 4 March 1941. Two transports (*Queen Emma* and *Prinses Beatrix*, ex cross-channel ferries) with 500 men of 3 and 4 Commando plus 50 Royal Engineers and some Norwegian troops were escorted by Somali with four other destroyers, *Bedouin, Eskimo* and *Tartar* of our own Flotilla and HMS *Legion*, to destroy oil factories and other installations useful to the Germans. Captain (D)6 in *Somali* was Senior Officer. Two cruisers, *Edinburgh* and *Nigeria*, formed a covering force while HM Submarine *Sunfish* acted as a navigational beacon.

The first landing was at 0500 and as *Somali* and one transport were moving up Vest Fiord towards the most northerly landing point an armed trawler was sighted in the half light moving out to investigate. It was clearly necessary to dispose of her quickly and so we fired a few salvos in 'rapid' at about 5,000 yards which started a fire on her upper deck, damaged the wheelhouse and disabled her so that she grounded on a small islet off Skraaven. Had she remained there she would probably have taken no further part in the day's events.

The operations ashore were successfully completed by 1300 and as they were drawing to a close the trawler was seen to have refloated and to be adrift. The Flotilla Signals Officer, Lieutenant Sir Marshall Warmington, suggested that she be boarded in case there were any intelligence materials not already destroyed. Captain (D) was reluctant to spare the time or to lower a ship's boat – the Luftwaffe was expected and he had the transports to think of – but he agreed to use a local Norwegian fishing boat which was called alongside. Lt Warmington and two military officers accordingly boarded the trawler, which was found to be the *Krebs*, and collected what papers they could find. It was clear that the Germans had already destroyed as much as they could. He did find a locked drawer in the captain's cabin which he opened by firing his service revolver at the lock. Inside was nothing except two objects which he did not recognise but which he took away. (They were actually Enigma rotors.) The boarding party was recalled to Somali after about half an hour. Captain Caslon took personal charge of the rotors, which were passed to the proper authorities together with all documents on our return to Scapa on 6 March. It is now known that these included the Enigma key tables for February 1941, which enabled Bletchley Park to read the February naval traffic from March leading in turn to further developments.

The official history indicates that this find was somehow prepared for and encouraged but it would seem, from my recollection of Captain Caslon's reluctance to allow the boarding of the *Krebs*, that although he may have been aware of the NID/GC&CS concertation[2] it was not taken to be a primary aim of the operation – or perhaps he just did not consider *Krebs* to be a fruitful source of intelligence. The fact that it proved to be so was a matter of pure chance.

The idea of sinking *Krebs* before leaving

did arise but I do not remember this being done, although we did fire at least one depth charge, possibly with that intention. The explosion(s) produced such a prodigious quantity of stunned fish that in a very short time we were surrounded by so many Norwegian fishing vessels that it would have been difficult to fire more charges without damaging them. Had we sunk *Krebs* by gun fire I really do not think that I could have forgotten. We were at AA action stations. The main concern was the safe withdrawal of the transports and this, with the constant expectation of air or other enemy action, would justify her being abandoned. To my best recollection this was what happened, as would surely have been the case had she not refloated herself.

Whether or not the *Krebs* 'find' was a matter of chance, the next target was definitely found by design. Using the information taken from *Krebs*, Bletchley Park had determined that German meteorological reporting ships stationed in the Atlantic were likely to be carrying naval Enigma codes[3] and suggested that to capture one or more of these would be worth while. One was the *München* and another (later) the *Lauenburg*. Hence in May 1941 we were interested to find ourselves, together with *Bedouin, Eskimo* and *Nestor*, all in company with HMS *Edinburgh*, heading purposefully northward. Once we had left Scapa it was revealed that our quarry was a German meteorological vessel believed to be somewhere between Iceland and Jan Mayen Island. It seemed a small target for so powerful a force but we were not in the secret. This was Operation EB.

On the afternoon of 7 May a small vessel was sighted; the force went to action stations and closed her at high speed, with *Somali* in the van. When the range was about 10,000 yards I was told to open fire with the aim not of sinking her but of causing maximum alarm. I believe that I am right in recollecting that we fired practice projectiles. After a few salvos she was being straddled and we could see feverish activity on board; what appeared to be the entire company was piling into a boat and pulling away from the ship. Fire was then ceased. One man could be seen in the water clinging to the boat; it was suggested that he might be the local Gestapo agent – but that was pure conjecture.

As *Somali* passed the boat Captain Caslon ordered the crew (in German) to pull to HMS *Edinburgh* and then proceeded to take us, at high speed and with great precision, alongside the trawler which proved to be the *München*. She was grappled and our First Lieutenant, Lt H. Stuart-Menteth, with Lt Warmington and the Flotilla (T), Lt Charles Pollock, jumped across followed by a small supporting party. Much secret material had already been destroyed but not all; papers recovered and transferred to HMS *Edinburgh* included, as is now known, the German naval Enigma keys for June 1941. It appears that, as part of the plan for the operation, Captain Jasper Haines, Royal Navy, was embarked in the cruiser and, indeed, also boarded the *München*. He was a Bletchley Park signals expert and presumably concluded that his journey had not been wasted.[4]

The *München* crew had all been taken below in HMS *Edinburgh* without delay; she and the remainder of the destroyers now parted company to return to Scapa, leaving (D)6 in *Somali* with orders to tow *München* to Thorshaven in the Faeroes. The word was passed that no mention was to be made of the operation nor indeed of the very existence of the trawler in any conversation or letter. It was given out in the official communique that *München* had been scuttled by her crew. This insistence on the most stringent secrecy was driven home when Captain Caslon discovered one of the boarding officers sporting a very fine pair of Zeiss binoculars on his next watch; this unfortunate was forcefully reprimanded on the spot and the glasses unceremoniously confiscated.

München was not an easy tow; steering was difficult and possible speed was only of the order of five knots or less. A small engine room party was sent over, therefore, under the direction of Somali's own engineer officer, Lieut (E) E. C. Fripp. *München*'s machinery was unfamiliar to him and quite advanced for a ship of her type but in spite of this and the fact that all tallies were in German he soon had her developing enough power to raise the

towing speed to the region of eight knots with the added advantage of making steering much easier. This so pleased Captain Caslon that he unbent to the extent of signalling 'Whack her up, Frippo !' – which was a great boost to morale in both ships.

Thorshaven was reached without our being sighted either by aircraft or U-Boat and *München* was handed over, with some relief, to the British authorities for concealment. Shore leave was not granted but those special men, the postman, the canteen manager and the wardroom messman, went about their respective businesses. They returned with the information that a ship's chandlery at the head of the fiord was amply stocked with items such as silk stockings, roll-ons etc the like of which our wives and girl friends had not seen since pre-war days. Needless to say they were sent back with heavy commissions and our purchases were put to good use at home, after the inevitable formalities with HM Customs at Scapa.

Our return to Scapa was uneventful until raising the port war signal station at about 0600 on the morning of arrival. The usual challenge was made but unfortunately *Somali*'s reply was not correct. A somewhat embarrassing exchange followed. We were eventually ordered to approach Switha Gate and close the Port Examination Vessel. This turned out to be a trawler, smaller and rather less impressive than the *München*, commanded by an ancient lieutenant of the Reserves. There followed another undignified and quite searching catechism, this time on the loud hailer and between Captains in person, at the end of which we were given permission to enter harbour and secure to our buoy in Gutter Sound, on condition that we hoisted a signal announcing to all who could see including, needless to say, RA(D), that we should be regarded as a suspicious vessel. It turned out that in the drive for security the Confidential Book Officer had destroyed one document too many. Captain (D) was not amused but at the same time he did not harbour grudges. It cost the CBO a few pink gins but in the end the affair was recognised as a little light relief and quickly forgotten.

Somali played no part in the carefully planned capture of the *Lauenburg* in June 1941 nor in the fortuitous 'secret capture' of U110. I have later gathered that the capture of the *München* was one of the late Professor Hinsley's favourite projects but the *Krebs* herself, I think, was a stroke of luck. Quite a good stroke because, though not extensive, the information found gave the Bletchley Park experts their first real chance to read the naval Enigma.

I realise that these events have been previously recorded in a number of publications but all, as far as I know, at second hand. While my memory over 58 years is in many respects suspect I was certainly there and as the youngest officer in *Somali* I am probably one of the last survivors. In that spirit I offer this brief account and should be interested to hear from any other witnesses.

J. K. H. FREEMAN
COMMANDER, RN

References

[1]A. B. Sainsbury, *The Royal Navy Day by Day* (Ian Allan 1979/92), p.59.

[2]F. H. Hinsley ed., *British Intelligence in the Second World War* (HMSO, 1979-1994): Vol I at p.337:- 'In advance of the Lofoten raid of 4 March a special effort to seize the Enigma machine and its settings was concerted between the NID (Naval Intelligence Dept) and the GC and CS (Government Code and Cypher School), It was rewarded by the capture in the course of the operation, from the armed trawler *Krebs*, of material which enabled the GC and CS to read the whole of the traffic for February 1941 at various dates from 10 March.'

[3]Hinsley, Vol I Appendix 12.

[4]Patrick Beesley *Very Special Intelligence* (Hamish Hamilton, 1977) p.71.

Correspondence

BRNC – A REPORT OF PROCEEDINGS

Sir,–Having finally escaped the confines of BRNC for X course I read Commodore Clare's report on developments at the college with great interest. Although appropriately aware of my relative lack of experience in the navy, I thought that it might be worthwhile to make a few comments from 'the other side of the fence'.

First, although not most importantly, many will be relieved to hear that rumours of the demise of the passing out photographs on the main drag are greatly exaggerated. The plan, although at the moment only partially completed, is to move them to a new position around the College Display Room, the renamed Fleet Display Room, just north of the Quarterdeck. In contrast to the previous situation they are to be hung in a logical order and will be joined by several photographs which never reached display. In their place the main drag is getting a series of photographs showing the modern fleet and personnel, which are complemented by six ship models representative of the fleet. The consequence will be a lighter and more positive main drag and a better display of the photos.

But what of the training? Overall it is much improved. The new modular system for the New Entry and IST (Initial Sea Training) terms, with an exam at the end of each week long module, keeps people on their toes and means that YOs (Young Officers) going off to their fleet time ships will know far more than those of a few years ago. The assistant divisional officer module in particular is excellent and will enable YOs on fleet time to be used much more actively by the DOs to which they are attached, enabling valuable experience to be gained.

Leadership training has also been improved. The old PLX (Practical Leadership Exercise) on Dartmoor has been replaced by the Assessed Command Exercise or ACE. Much is the same: Officer Cadets still spend two and a half days on Dartmoor getting generally wet, cold and tired while completing various tasks. The change is that in place of the march-ons and march-offs, ten miles or so each at the beginning and end of the exercise at high speed which were generally considered the worst aspect of the whole thing, an additional day has been added which is spent on the picket boats on the river. The overall result of this is to reduce the physical strain but lengthen the period of sleep deprivation. As either method is equally effective in putting people under stress, and dealing with a lack of sleep is a more useful ability in the fleet than physical endurance, both for dealing with Operational Sea Training (OSTs) and runs ashore, the change is probably an improvement.

A leadership package has also been introduced for the IST term. Known as MARL (Maritime Leadership), it involves several days living on the picket boats, with cadets taking in turn the roles of CO, XO and navigator. In contrast to ACE, the tasks last six hours or so and require a more practical get-it-done kind of leadership. This is another positive development. The autocratic directive leadership taught and examined during PLX and now ACE is clearly a necessary ability but, as a friend put it, if you went to the fleet doing that all the time you'd get thrown over the side on the first dark night. MARL allows cadets to practise the art of making people want to do what you tell them, while offering official support and feedback.

Commodore Clare also mentions the change in the initial process of militarisation for cadets. The methodical destruction of shirts by ironing them into precise rectangles to fit in drawers for nightly inspections has been replaced by a more relaxed approach requiring only general tidiness. The formal gym sessions, which involved vaulting and rope climbing by numbers leading to a formal assessment, has largely been replaced by swimming pool sessions. Cadets are not shouted at for the first three weeks and fewer punishments are handed out. Precisely as Commodore Clare points out the new system is better suited to the twenty-four year olds with degrees who now form the majority of the entrants. A glitch did however occur: it is tacitly accepted among many of the staff at BRNC that the relaxation went slightly too far for the September 1998 New Entry intake,

who on their elevation to IST in January 1999 became involved in a series of minor but unfortunate discipline problems.

Marinisation is now given much more emphasis. All cadets spend some time in the college yachts and dinghies, leading to a better appreciation of the basics of wind and tide. Perhaps even more useful are the practical aspects of MARL, described above, which involve chartwork and planning and so give meaning to the dry perusal of Admiralty Tide Tables in the classroom and six minute fixing in *Orwell*.

Overall therefore the effect of the changes implemented by Commodore Clare has been overwhelmingly positive. Officer training at Dartmouth is now more suited to the entrants which it must inspire and to the needs of the fleet into which they will go. This is reflected in the atmosphere at Dartmouth, which is now optimistic and forward looking. Cadets now genuinely believe that they are being prepared for the fleet rather than being put through a cumbersome initiation ceremony. Further improvements and fine-tuning can be made, perhaps particularly for the graduates' course, but the framework has been set. BRNC's new mission statement is 'To stimulate, inspire and teach a new generation to act and react instinctively as Naval Officers in the front line.' The college is now better able to achieve this than it has been for many years.

ALEXIOS

DISCUSSION IN *THE NAVAL REVIEW*

Sir,–Your January Editorial mentioned a letter which you allowed as being a 'questioning voice', even though it was close to failing the criteria of loyalty and constructiveness laid down in January 1998. For obvious reasons, I took the letter to be Brutus's 'Discussion in *The Naval Review*'.

The question of whether Brutus couched his thesis in too intemperate terms is of course a matter for Editorial decision. That said, it addressed questions of concern to the Service which perhaps deserve more discussion in the *Review*'s open forum. Questions, indeed, which would be in line with the view expressed in that 1998 Editorial – 'if storm signals are flying, it is worth pointing them out'.

Brutus certainly points out perceived 'storm signals'. Assuming their validity, some of these points come down, in the final analysis, to finance. Others relate to social change, particularly dramatic in Britain in the last two or three decades. However, I found it disturbing that some relate to issues which I raised when I swallowed the anchor in the late '60s. Impact of apparent financial economies on morale, and thus on operational effectiveness; decreasing command opportunities for warfare officers; the 'resign if not promoted' syndrome, are but three examples.

A particularly telling specimen of false economy was Brutus's '. . . a Regatta Guardship had to remain in the port in question for two days after the regatta had finished since overtime to get her alongside her Base Port was not available. Clearly our people's morale had no budgetary significance'. I recall so well in my own experience (don't we all?) many occasions when penny-wise decisions made by some part of the civilian bureaucracy remote from the cutting edge resulted in unquantifiable pound-foolish impact in the morale-recruitment-retention area. These are lessons which one would have hoped had long since been hoisted in and acted on. Economies of this type have detrimental ripple effects which, in aggregate, result in net additional costs.

Observation suggests that other arguments he made have moved closer to centre stage than in years past. Lack of total commitment among both officers and ratings, if a valid point, perhaps has more to do with Britain's socio-economic structure now than it did then. And Brutus's comment about the '. . . plethora of glossy publications . . . while the pay rise is again staged' seems, from an ex-Service perspective, to be justified when one sees the ever-improving elegance, style, and presentation of *Broadsheet* bearing a strange Parkinson's law type of inverse relationship to the size of the fleet.

The January 1999 edition of *Harbour Stations*, the journal of the Friends of the Royal Naval Submarine Museum, quotes FOSM: 'talking of people, he described

morale as brittle, with people nervous of the future and the Strategic Defence Review . . .' 'Brittleness' is not normally a word one associates with morale of the submarine branch. Perhaps it is linked with some of the issues raised by Brutus.

Given his basic premise, a number of other concerns might be worthy of more discussion in the *Review*. Among them are under-manning ('gapping') and the women-in-combat question.

If morale suffers, then clearly 'gapping' results. The 1997-98 *Broadsheet*, under the heading of 'Stretching', graphically presented 'gapping' as currently 12%. If episodes like the regatta guardship are endemic, and if morale is in fact being eroded by them, then Brutus is right in calling for a more lively discussion of the impact of moneygrubbing on the ultimate determinants of recruitment and retention.

The issue of mixed-gender manning has been dormant in the *Review* for some time. Perhaps everything is going to plan, with the exception of occasional notes in *Broadsheet* about zero tolerance of harassment. Or perhaps on the other hand political correctness dictates that the subject be closed.

The views of a number of RN officers, serving and retired, with whom I keep in contact lean to the latter explanation. A constant theme is the sheer amount of 'management' time that is spent maintaining some sort of war readiness while dealing with the challenge of mixed-gender manning. Combined with 'gapping', it must be a tricky balancing act. A 1997 *Daily Telegraph* article had this to say:

> '. . . the deep difficulty in which the Navy finds itself over the policy to allow women to serve at sea, begun so hastily six years ago . . . the scheme was forced on the Navy in early 1990 by the then Defence Secretary . . . the Navy was given three weeks to prepare to receive Wrens at sea. . . "Being banged up together in a modern warship is about the worst possible conditions to encourage sexual tension" a recently retired officer said, and so it has proved. . .'

In the US, a 1997 *USNI Proceedings* carried an article by Marine Corps Major General J. D. Lynch, 'All Volunteer Force is in Crisis', in which he wrote: '. . . that the women-in-combat pressures have nothing to do with combat readiness and everything to do with social engineering is self-evident. That they are the outgrowth of a political agenda, not an informed effort to improve the armed forces, also is self-evident. . .'

If Brutus has the germ of an idea, that the *Review* should be used by its members as a more aggressively controversial debating forum (but within laid-down Editorial limits), surely 'women at sea' might be added to his shopping list.

He makes a good case, albeit of questionable acceptability in terms of style. If penny-wise is being extremely pound-foolish (which my own experiences of decades ago indicates was often the case), if both officer and rating morale are under pressure, and if women in combat is truly a lively issue, then possibly the Review could contribute to constructive discussion by encouraging members further to explore these and other vital matters.

On the other side of the coin, January's carefully argued and clearly written contributions on 'The Three Tier Commission – is the Officer Corps Under Threat?' and 'A Case of Imperial Clothing' would seem to be just the kind of topics for which the *Review* already provides so admirable a forum. Both articles were authoritative and closely reasoned, and should give rise to some uncomfortable (and thus beneficial) thoughts in high places.

JOHN LEA
LIEUT. CDR, RN

Sir,–I was interested to read the letter from 'Brutus' in *The Naval Review* for January. The Navy of today has grown out of the Navy of yesterday and looks forward to the Navy of tomorrow. It appears that Brutus is only concerned with today and tomorrow; the past, which has brought us to where we are, seems to be of no relevance to him.

But 'Brutus' will be old one day, and still a member of *The Naval Review*, I hope. He may find the Navy of his retirement years is

becoming a little foreign to him, and he may find himself dwelling on, and corresponding about, the days when he was active and at the centre of planning and development.

If the contents of *The Naval Review* were to be restricted solely to present day concerns I fear that you might lose half the membership.

While I try to keep reasonably informed about the Navy of today – I have just re-read the two 'Alston' articles mentioned by 'Brutus' – I can surely be allowed an occasional foray into the 'old unhappy far-off things and battles long ago'.

JOHN A. WELLS-COLE
Cadet & Midshipman, RN
1937-1943
SUB-LIEUT. &
LIEUT. CDR, (CCF) RNR
1977-1989

STATECRAFT AND SECURITY

Sir,–In his review of Ken Booth's book, *Statecraft and Security*, Admiral McGeoch seemed to me to have been commenting rather more on Commander M. K. MccGwire to whom the book is dedicated and to whose work and thought one chapter is devoted than on the book itself. This being so, I ask to be allowed to defend my old friend from the accusations made against him.

I first met Mike MccGwire when I went to Dartmouth in 1941. He was the 'Drake' (new entry) House Cadet Captain; and I was still considerably in awe of him when, as a commander, I relieved him as Head of the Soviet Naval Analysis Section in the Defence Intelligence Staff 26 years later.

His reputation as such throughout the NATO Intelligence Community was enormous, and derived from the immense respect in which his powers of objective analysis were held. 'Analysis', actually, is the wrong word; for in strict Intelligence parlance an 'analyst' is somebody who decides what this or that specific equipment or unit can do. The men and women who have to work out how all the pieces of jigsaw fit together, and thus to deduce their relevance to national policy, are called 'estimators'; and among naval estimators Mike, in his day, was acknowledged as *sans pareil* on both sides of the Atlantic.

It is important, however, when considering Admiral McGeoch's accusations, to distinguish between the position which MccGwire held *ex-officio* as Commander DI3(Navy) and the views which he held (and still holds) as a private citizen. In the latter capacity, MccGwire has long argued in academic circles generally that these are very damaging side-effects to the accepted philosophy of deterrence and specifically against the need for the United Kingdom to maintain an *independent* nuclear deterrent; and, although I do not personally agree with him either generally or specifically, I respect the objectivity of his arguments – as indeed I respect those of Field Marshals Lord Carver and Bramall who are of much the same mind. (Debate, House of Lords, 17 Dec. '97).

But to hold such a position is not (in the general case) to argue that the West should abandon its SLBM force; and Admiral McGeoch's wording could be read as implying that MccGwire preaches such an abandonment. He emphatically does not, and never has. Nor, to my certain knowledge, has he ever argued *professionally* against a British independent deterrent either. It simply would not have been in his remit as an Intelligence officer to do so.

Admiral McGeoch may have been misled as to MccGwire's professional position by his assessment that, in the sixties, the Soviet Union was doing its best to find a counter to the SLBM; for the very suggestion that they were thus interested might have been taken to comment adversely on the inviolability of the Polaris submarine which Admiral McGeoch did so much to bring into successful service. But surely the assessment was not only correct but obviously so. With the SLBM posing so grave a threat to them, would not the Soviets have moved heaven and earth to find a counter – however remote their chance of success?

This rebuttal, on behalf of MccGwire, also seems to me to be necessary on behalf of the UK Intelligence Community in general, for Admiral McGeoch leads into his accusation that MccGwire tried to cause the abandonment of the SLBM by quoting a suggestion made in *Statecraft and Security* that he (MccGwire) 'succeeded in getting the official British

intelligence estimates rewritten, with a new picture of Soviet maritime objectives.'

Happily, commanders, however brilliant, in the Defence Intelligence Staff will never succeed in getting the estimates rewritten unless the facts bear out their arguments; and the immensely thorough staffing which any assessment is given before it reaches the Joint Intelligence Committee for their approval is designed to ensure that no ill-bred hobby horses are ridden into those estimates.

Finally, I was very sad to read into Admiral McGeoch's wording considerable criticism of MccGwire's idealism. This is a subjective interpretation, and I apologise to the admiral if I have read him wrong. But 'desired to serve humanity in general, rather than his own country with whose policy and behaviour he had become disenchanted' had pejorative undertones for me, as did 'this radically minded idealist'. All who know him, know that Mike MccGwire gives his all to anything and everything he does; and none of us who read the *apologia* which this dedicated man circulated among his friends at the time he retired from the Navy had anything but respect for the reasons he gave for wanting to serve the United Nations.

President Kennedy once, when asked how he would like to be remembered by posterity, said, 'As an idealist without illusions.' No bad description, that, of Mike MccGwire.

PETER KIMM

A CASE OF IMPERIAL CLOTHING

Sir,–OTH is, of course, quite right. Although we are told that King Alfred set out to build bigger and better ships than the Danes, since then our de facto tradition has been to lag behind the opposition in material terms and rely on sufficiency and morale to see us through. We have often lacked sufficiency, too, which is less surprising as that is truly expensive.

My point in 'A Case of Imperial Clothing' is that we are spoiling the ship for a ha'porth of tar. That we have often done so in the past is poor justification for continuing to do so now. For a relatively small outlay above present provision, or perhaps none at all, we could build ships that would be disproportionately better than they are at present. But because we don't look very closely at what other navies are doing and because we have never really questioned the quality of our own design we continue to build ships that, good though they are in many respects, still fall short of a readily attainable, and highly desirable standard.

Sufficiency is beyond us; morale is not exclusive to ourselves; quality, real quality, is within our grasp, if we did but know it.

GREEN JACKET

WHITE UNIFORM

Sir,–Captain Jackson's letter about tropical clothing (*NR*, April '99, p.151) struck a chord. In the British Navy Staff in Washington, we spend six months of the year in whites and while the experience endorses all of what Captain Jackson states, I feel that he has not gone far enough in his comments.

The normal summer working rig in the USN is Khakis; however there are two white rigs – Summer White and Service Dress White. Summer White (tropical shirt and long white trousers) is the every day working rig worn for most occasions except ceremonial. The USN wear their qualification badges and medal ribbons with this uniform and it looks extremely smart. For ceremonial occasions, they wear Service Dress White aka Choker White. As with our No.1s, this can be graduated from medal ribbons through medals to the whole fig and caboodle with swords etc.

One rig they do not have is the Bush Jacket. This essentially British uniform is a colonial anachronism. It is composed of three cloth and eleven brass items, shoulder boards and is a nightmare to construct. Until recently the Bush Jacket was made from a material akin to sail canvas, looked scruffy and creased the moment the wearer stepped into it. As a rig, it looks out of place against the Ice Cream Suit and the open neck, accompanied by a hairy chest and short sleeves, makes it inappropriate for all but the most informal occasion: it fails to meet the requirement for user friendliness, comfort or smartness and is best consigned to the rag bag.

Perhaps the money expended on the issue of Bush Jackets to officers and senior rates

should be spent on Ice Cream Suits, sensibly designed and in easy-care materials instead. We should also pursue the Summer White option – shorts are fine at sea and alongside, but are out of place when uniform is worn ashore outside the dockyard gate.

On Captain Jackson's other points about shoes, belts and buckles, I can only agree. That white buckskin officers' shoes and their leather soles are lethal on the highly polished Pentagon floors and totally unsuited for wearing at sea – but as non-sea going officers we have not been issued with deck shoes and steaming boots do not go that well with white uniform – especially for quasi-ceremonial occasions. His comment about the Flag Shoulder Boards is also well made. BNS advice to visiting senior officers is that they consider wearing the non-ceremonial shoulder boards which clearly delineate the rank, to avoid confusion over the number of stars.

C. C. G. SHARP
COMMANDER, RN

Sir,–Captain Jackson (*NR*, April '99) is broadly right in his comments on the contemporary use of white uniform. As a serving overseas commander, and as one of his predecessors as NA in the Caribbean, I can say that nothing is more lacking in visual impact or style than the current short sleeved white bush jacket. Although it is comfortable to wear, as Captain Jackson hints, it is more appropriate as a routine non ceremonial day rig for Duty Officers than the principal tropical day rig for major representational occasions.

A well tailored white tunic (the 'ice cream' suit) is the ideal uniform in warm weather. I regularly wear mine for all sorts of routine representational and ceremonial events; it looks smart, is cool to wear and does not make me feel like an extra from either Gilbert and Sullivan or Hollywood. Easy to lay out and prepare, with modern materials, laundering is not an issue. I hope that those who can will make every effort to use and retain this most traditional and comfortable of rigs.

Properly fitted white tropical shirts and shorts similarly are practical, smart and the envy of many of my Army and RAF colleagues here. I do recognise that they are not suitable for wear within air conditioned commcens or operations rooms, indeed we have the ridiculous sight of ratings wearing blue jerseys on top of tropical rig in our underground offices. For these people, I am very happy to authorise locally a sensible compromise. There is a bonus too! At the risk of not being wholly politically correct, nothing cheers the spirit more during interminable industrial relations meetings than the sight of a smartly dressed female rating cycling past my office.

I cannot agree that we have made real progress in uniform in the last thirty years: look at the evidence. I possess and can still wear blue jerseys of three different designs. The introduction of a standardised shirt for all junior ratings no doubt saves on procurement cost but does nothing for naval esprit. Soldiers and airmen look smart enough in this uniform with their distinguishing badges or emblems but able rates lack this. In the public eye, able rate stewards here are indistinguishable from their civilian counterparts; in consequence and on appropriate occasions I direct that white fronts should be worn. The spin off in pride shown by our people should not be underestimated. In addition, I am giving serious thought to instituting a tri-service (and why not to the civilian workforce too?) emblem for all my people. The key of Gibraltar sewn on the sleeve is the likely preferred symbol. Probably it breaks some rule or other but the improvement in cohesion and the visible recognition of being part of a tri service organisation is worth promoting.

A. J. S. TAYLOR,
COMMODORE, RN

COURT MARTIAL PUNISHMENTS FOR OFFICERS

Sir,–I was extremely disappointed and rather dismayed for the RN by the recent Court Martial punishment of a Captain and a Commander found guilty of drunkenness whilst on an official visit abroad. Coming soon after the Court Martial of a Commander in command that also struck a discordant note, I am concerned that it shows a disturbing credibility gap for punishing officers – and I

know from idle (but deadly serious) conversations with colleagues both more senior and more junior that I am not alone in my views. The perception (and the fact) is that the punishments for both Courts Martial were incredibly lenient in view of the position held by those officers. I sat on the board of a Court Martial of a Royal Marine Lieutenant 18 months ago for drunkenness, so I am aware of the thought processes that go into punishing an officer, a demanding task that should not be approached lightly. Nevertheless, these recent outcomes are difficult, impossible to justify rationally. Not only does it look very bad compared to the equivalent punishment a rating would get (and that no doubt this seagoing Captain had handed down in his time) but it sends all the wrong messages about the impartiality and fairness of the Court Martial system. Moreover, I believe it highlights a growing problem with officers' punishments that needs urgent investigation. In the past, when an officer was charged with a serious offence, he would in all probability resign rather than go to trial. This covered a multitude of sins but was usually acceptable to everyone and, in its own way, generally just. Nowadays, different attitudes and a more aggressive legal approach make resignation much less likely and as a result the punishments that a Board can hand out can often appear to be out of step with what is expected or actually justified by the facts of the case. When you also bear in mind that officers, by virtue of their position, status and responsibility, ought to get punished harder in a like-for-like case, it all begins to look a bit squirmy. Do we need to make the fines much higher for officers – automatically double that which a rating might receive? And, more crucially, do Boards now need the ability to 'dis-rank' an officer if he shows a lapse of judgement sufficient to doubt his ability to hold his current rank? After all, we do it for ratings and it is difficult to argue that nowadays the differences between officers and ratings are such that a punishment deemed suitable for one is not appropriate for the other.

I am a great believer in the military justice system, but it is open to many accusations if we, and by that I mean all of us who are liable to serve on Boards, do not do our job properly and display the necessary moral courage. Nevertheless, this most recent Court Martial punishment has left many with an extremely jaundiced view of officers' trials and punishments. I was serving with an Army unit at the time and their immediate suspicion was that the Board of that Court Martial had not, for whatever reason, been sufficiently objective in its approach to the trial and that its judgement was extremely suspect. Unreservedly, it was agreed that the punishment given for officers so senior (and in command) was wholly insufficient. Regrettably, I found it hard not to agree.

AIDAN TALBOTT

PENSIONS

Sir,–Alastair Wilson and others have written about pensions.

I am sure I never joined with the intention of making money, but was somewhat surprised to find that my present pension (Captain retiring at 50 in 1973) is now rather less than the full pay of a Chief Petty Officer. It used to be similar to a Lieutenant on promotion.

This seems to indicate a welcome real increase in current pay compared with the indexed pension for which I, and I expect many others, are more than grateful.

Once upon a time officers joining could be expected to have some kind of private income. Nowadays I guess that this is very rare.

Senior Officers' rates of pay are now beginning to nudge those of shoreside professional people. I hope they will find their pensions are similarly generous.

I am reminded of Arthur John Power welcoming *Vanguard*'s ship's company in 1949 when he brought his flag on board as C-in-C Med. 'It costs me money to be your Commander-in-Chief. . .' In that year Admirals of the Fleet were paid £2000 a year; the same as in 1910!

FORTROSE

ALLIANCES/PARTNERING

Sir,–Your April edition carried Lieutenant Foster's article on the benefits and principles

of Alliancing/Partnering next to Steamtrap's paper which, in passing, advocated a return to the 'Keep it simple, say what you want and hold the vendor to it' commercial relationship.

Embracing both sides of the argument is the truth that it is very much a matter of 'horses for courses'. I think that there are some aspects of some projects that make the Alliance/Partnering/Joint Project Team approach attractive to both sides and having read the MOD/CBI Guidelines to Industry No.4 *Partnering Between MOD and its Suppliers*, through and through, one is hard pressed to come out with any more positive advice! In any event, in Lieutenant Foster's submarine upkeep projects in Devonport it appears to be working well.

For the record though, where the risks are not fully definable or measurable and where they are not entirely transferable (or would be prohibitively expensive to transfer) and where co-operative joint management rather than proactive avoidance is the desired behaviour then, if the project MUST go ahead before the situation can be corrected, some sort of partnership is appropriate.

Where the management process results in man to man marking and where an overhead reduction can be made possible by a joint approach there is again much to commend it.

Finally, where the practice of Contract as opposed to Project Management will in the long term lead to a reduction in MOD's knowledge of techniques or technology and hence MOD's ability to act as an intelligent customer, a joint approach offers less tangible but nevertheless worthwhile benefits. There are opportunities within these arrangements for individuals within MOD to play a part one step nearer the coal face, from which MOD has progressively withdrawn over the last decade, and the additional knowledge and expertise resulting from this shouldn't be ignored.

On a totally different subject and somewhat mischievously, I am always minded of the US Marine Corps when I read articles in praise and defence of the single service ethos.

Without getting bogged down in the exact details, the US Marine Corps seems to operate by land, sea and air with a resource level that is not an order of magnitude different from the sum of our three services. The Corps appears to manage within a single service framework with a degree of success.

I am not sure whether the USMC operates submarines so it may be that FOSM would have to remain aloof from such an organisation but the remainder should perhaps be lumped together and run by a Royal Marine. It seems to work satisfactorily that way!

OWEN DAVIES

REPORTS ON OFFICERS (LEADERS AND MANAGERS)

Sir,–One must accept that any report on an officer often says more about the reporting officer than his subject. However, the format used is obviously vital for balance, and whilst the old S206 may have given much useful evidence on reporting officers the later (96) one, by giving such emphasis on technical competence, robs reports of character, as does some current habit.

Surely leadership must be the prime criterion. The format must encourage this even at the cost of opening the guard of reporters. Besides, 'I wouldn't breed from this officer' is much more fun.

Perhaps these points could be considered in the new tri-service form?

RICHARD FRANKLIN
CAPTAIN, RN

THE MARINE ENGINEERS' REVIEW

Sir,–As Commodore of the Square Rigger Club, I felt it was my duty to nit-pick at RBB's review of *The Marine Engineers' Review* in his item about the Sail Training Association's 'contract with Appledore Shipbuilders to *build* a 165ft steel hulled brig' recounted near the bottom of the left hand column of page 167.

In fact the STA *purchased* last October/November two incomplete passenger brigantines that had been built by Abeking & Rasmussen in Germany (I think actually a yard in East Germany which they had taken over).

They have engaged Captain Mike Willoughby to fit them with a brig rig

(originally a barque but changed to brig on second thoughts) and a contract has, I understand, been made with Appledore Shipyard to alter the two hulls as necessary and complete them as brigs to replace the *Sir Winston Churchill* and *Malcolm Millar*, their two existing topsail schooners built in 1966 and 1968 respectively.

MORIN SCOTT

THE COMPANION TO BRITISH HISTORY

Sir,–Thank you for G. F. Liardet's charming and heartening review of my book *The Companion to British History* (Longcross Press). May I mildly observe that quite a number of apparently missing things and people only seem so because space shortage has inhibited separate headings? Thus the Battle of 'Tannenberg' (1914) will be found both under HINDENBURG and under WORLD WAR I (2). I was not prepared to say (but believe) that the Black Prince was a victim of malaria; but, whatever the position, (see CURZON (7)) I do suspect that Elinor Glyn enjoyed Curzon on the tiger skin.

CHARLES ARNOLD-BAKER

THE USE OF FORCE

Sir,–It is good to see a number of articles appearing in *The Naval Review* which in various ways impinge upon the 'Philosophy of the use of force', a topic about which Sir James Cable has written at length.

In the planning of CDS's conference for Commonwealth Chiefs of Staff (Unison 63) Lord Mountbatten was invited to include this topic as the main theme for the conference. He did not approve, saying that it was too political. While this was almost certainly correct for a meeting with such wide membership, there seems little doubt that a full understanding of the ramifications of the use of force is needed today by all in Whitehall: politicians, civil servants and the staffs of the armed services alike.

The development of rules of engagement is one matter that closely affects relations between Government and the Military and which has clearly been well addressed since the Falklands war began. There are many other factors which affect this relationship some of which will predicate particular military postures and even perhaps procurement.

It is only necessary to list Kosovo, Iraq, Sierra Leone and the Falklands to realise how diverse scenarios can be. What is the effect on the morale of a nation struck from a distance by precision guided missiles? What was the effect of air attack upon Bedouin in the days of T. E. Lawrence? What is the attitude of our allies to body bags? The questions are legion.

I wonder whether this topic is still regarded as 'too political' or whether by now the RCDS and Staff Colleges are able to study it in depth.

FORTROSE

NAME OF THE JOB?

Sir,–Retirement comes to us all eventually and, in my case, I'm delighted to report that it's well worth waiting for. However there are some surprises and, to remind people that outside they call a spade a spade, I thought I ought to pass on the following experience: exactly one year after being lucky enough to fly my Broad Pennant in the UK Carrier Group in the Gulf I received a letter addressed to me as 'The Light Bulb Buyer, Exeter Racecourse'. Nobody salutes you in Civvy Street!

G. K. BILLSON
CAPTAIN, RN

. . . AND COMMENT FROM A NEW MEMBER

Sir,–It gave me pleasure to devour each article, letter and observation in the January and April copies of *The Naval Review*. What a fool I have been all these years to have missed such informative erudition – and yes, occasional enthusiastic 'hogwash'! My step is so much lighter each morning as I now savour my spiritual return to the sea. There are too many officers, like myself, who have retired and departed the Royal Navy saying, 'Seen it, done it . . . it'll never be the same now I've left!,' who then secretly harbour their unrequited love in silence or cynicism. The prodigal mariner has returned to the fray.

A flash of the blindingly obvious struck me as I made my way through the contents of *The*

Naval Review. Many of the articles and comments, seemingly disparate at first glance, shared those primary threads which bind the whole together; fudge, loosen or cut some of the essential threads and the 'garment' will come unstuck. They also shared in common, elements of déjà vu – which will hardly surprise the historians – but which should serve to prompt those cynical 'modernists' to hearken to their heritage and their history.

Ethics and Foreign Policy? Too often a contradiction and the heady stuff of politicians! But *ethics* rang bells in the 'windmills of my mind'. They were implicit in '. . . the shape of things to come . . .' 'Britannia Forum', 'Perception and Reality' and 'A Case of Imperial Clothing'. . . Some correspondents bordered on the subject and even used that word vocation which has withered on the vine through lack of common usage – and a dangerous word to use in the age of 'Cool Britannia'. Therein lies the rub: off-the-shelf, wholesale 'newspeak' and 'pop-song' values from so called spin doctors, aim to indoctrinate young and old alike; the trick is not to believe their false appreciations.

Steam Trap's examples of wanton waste ('Perception and Reality') and misdirected funds sit uncomfortably among the government's priorities. The comprehensive 'Carrier 2000' articles made excellent reading but I fear suffered from the doctrinaire prioritisation that exists in the Ministry of Defence. I believe that Commander James too may have situated the appreciation in one important respect:

> 'The RN is *not* in the market for *impressive but extremely expensive* carriers. . .'

Let us start by substituting RN with 'Great Britain' or 'the United Kingdom' if you must – and then let us replace the emotive words *impressive but extremely expensive*, with 'cost effective'. It then appears logical to remove the word *not*.'. Thus the sentence now reads:

> 'Great Britain is in the market for cost effective carriers.'

So many politicians delight in demanding a 'joint-service' strategy (considered to be the path to further savings and improved efficiency) that I believe the Navy should jump aboard this sensible concept. Now, Commander James, I respectfully suggest that you return to the drawing board to use your acute and discerning mind in pursuit of the truth. Does the RAF require all that real estate and infrastructure with which to fight the Battle of Britain? Should there not be considerable benefits from rationalising the Country's defence needs further? I wonder at the savings. Would we not be wise to consider the merits of, 'Assault from the Sea or is it MCJO . . .' and also '. . . From the Sea and Beyond,' within this context?

And if we are to consider committing such a significant proportion of the RAF's airpower to include littoral operations, would the country not be better served in having the optimum size and fit carriers to do the job properly?

Thirty years have passed since the government of the day blindly spoke of the Empire and aircraft carriers in the same breath. No Empire, no carriers. QED. But the equation continues: no airpower, no seapower. QED. Let us not forget, however, that they continued to use the carrier to plug the gaps for a further twelve years — but that's history! Plus ça change!

Commander James, I would be delighted were you to marry your excellent paper to the optimum solution and I don't believe that our carriers would have to be a 'Nimitz'!

H. A. N. WILLIS
COMMANDER, RN

LORD DONALDSON'S REVIEW OF SALVAGE AND INTERVENTION AND THEIR COMMAND AND CONTROL (CM 4193)

This report was commissioned by the Government in the wake of the grounding of *Sea Express* off Milford Haven in February 1966. Although sparked by that disaster, it did not investigate it directly – that was done by the Marine Accident Investigation Branch and their report was published in July 1997 – but addressed the broader issues implied by its title.

The members of the review team in addition to Lord Donaldson were Professor Alisdair McIntyre, who had earlier co-operated on *Safer Ships, Cleaner Seas* (*NR*, Oct. '94), and Michael Ellis, General Manager of the Salvage Association. Terms of Reference were unusually wordy, but the pith was '. . . to advise . . . how the National Contingency Plan . . . should properly reflect the balance of public interest in the conduct of marine salvage operations in which there is a risk of marine pollution and where the use of intervention powers may be appropriate'. There was a number of points on which 'specific advice' was required.

Curiously, what has emerged is a much more concise report and set of recommendations than those in *Safer Ships, Cleaner Seas*. The main reason for this is that this Review focused on a single type of case: that is, an incident involving salvage and posing such a threat of significant marine pollution that government intervention is required. Once what the Inquiry chose to call the 'trigger point' has been reached, the Secretary of State for the Environment, Transport and the Regions should take responsibility and this must continue until the threat is past. To fulfil this function he needs enforcement powers.

So far so good. But clearly neither a Secretary of State nor a Junior Minister can spare the time, nor can he or she acquire the range of knowledge or expertise, to take personal charge of a complex situation involving both pollution and salvage. One of the central recommendations of this Review, therefore, is that a person should be appointed who could assume the duty of Secretary of State's Representative (sporting the unlovely acronym SOSREP) whenever the 'trigger' operates.

It is argued by the Review that the SOSREP should not be the Head, nor an existing post, of the Coastguard or in the newly-formed Maritime and Coastguard Agency (MCA). They, it is contended, will be fully occupied in operational tasks: not only routine tasks that go on all the time, but those that will arise specifically from the emergency in hand. In particular these will be Search and Rescue, short-lived maybe but clearly of the highest priority so long as the need is there; Clean-up at Sea, which may be protracted; and Clean-up of the Shoreline, which may be more protracted still. These three functions will see the Coastguard in the front line. But, the Review insists, there is a fourth function on which they may all impinge but is itself separate and needs to be: Salvage. It is here that 'ultimate control . . . must be exercised by the Secretary of State's Representative acting in the over-riding public interest'. So, SOSREP.

The reason for this unique treatment of the salvage element lies in the complexity of interests that are involved. Salvage, as all who have had to do with it from the simple tow under Lloyd's Form to the most complicated retrieval after fire, collision or grounding, is a commercial operation, existing in a thicket of law and a maze of technicalities; and when there is a risk of environmental damage, then in come groups of every description, some with valid interests and some not, and most terrifyingly of all, the media.

Consequently, SOSREP will have to be quite a person: in the words of the Review 'a considerable, and, preferably, charismatic, personality. He must be capable of listening, and being seen to listen, to the conflicting views of others with whom he is working. Once he has heard the arguments, he must be capable of quickly asserting his authority in a manner which commands respect and acceptance.'

It is clear that the powers of this individual,

once the Secretary of State's responsibilities are 'triggered', must be considerable and well enshrined in laws and regulations, and the Review makes full recommendations on the necessary developments. It does, moreover, foresee that in those circumstances a Salvage Control Unit will be set up, under the SOSREP and interacting with the Salvage Team on Board. This Unit 'needs to be as small as possible in the interest of speedy decision-making': it will normally be limited to SOSREP himself, the Salvage Manager, the harbour master if circumstances make that appropriate, one representative of the casualty's owners, one representative of the Maritime and Coastguard Agency, and an environmental liaison officer.

This concentration on operational efficiency is typical of a report that has 'Command and Control' in its title and exhibits throughout a refreshing recognition of the need, in emergencies involving salvage, to get things done right, expeditiously and in the public interest.

One aspect of the new organisation the Review does not address in any great detail is what SOSREP (and his staff) do in the 99% of the time when there isn't an emergency requiring his intervention. There are provisions, certainly, for a programme of exercises and clearly before (and after) these there will be a need for extensive visiting and reading-in. The Review envisages 'pre-planning of the likely courses of action', but not to the extent of SOSREP's being the initiator or producer of detailed contingency plans. Scenarios are in any case eschewed. It is however expected that SOSREP will be 'much occupied in considering *and approving* (my italics) plans by local authorities, harbour authorities and harbour masters'. In fact these are already required to be submitted to the MCA so there is no constitutional change there.

One modification to the present constitutional position, though, is foreseen and does affect the Ministry of Defence. Recommendation 2 states 'The Memorandum of Understanding between the Marine and Coastguard Agency and the Ministry of Defence (now in preparation) should state clearly that the Navy will act in aid of the Secretary of State's Representative to enforce a direction, if so required'. Only three of the Review's recommendations have been remitted by Government for further consideration (all the rest were accepted), and this is one of them. There will be further consideration with MoD and other departments on the principle that enforcement action should be taken quickly if required.

None of the proposed arrangements will be unfamiliar to those who have served on operational planning staffs or in Headquarters, Joint or otherwise. Being Government's Representatives in Waiting is the fighting services' normal function. But it is less familiar in other parts of Whitehall, and some change will be needed in attitudes particularly towards *tempo* (much faster than that normally expected) and *output* (tangible and beneficial results). A danger will be that SOSREP-in-waiting becomes just part of the administrative machine and loses operational sharpness. Whoever it is will deserve, from the services as much as anyone else, all the help and support that the job deserves.

RICHARD HILL

Book Reviews–II

HMS *ARK ROYAL IV*
Britain's Greatest Warship
RICHARD JOHNSTONE-BRYDEN
(Sutton Publishing – £20)
ISBN 0 7509 1798 9

I accepted the task of reviewing this book with diffidence, for I only served in *Ark Royal* (as her Gunnery Officer) for a few months (and those while she was refitting) before being unexpectedly kicked upstairs. I felt too that the reviewer should have been an aviator, though when I said as much to the author, he made the good point that the book is not just the story of the Air Department but of the ship as whole; and, as such, I reckon it has succeeded brilliantly.

Let me get my one niggle over and done with before proceeding. I *dislike* the title. The heroine of the book was *never* spoken or thought of as 'Ark Royal IV', and, further, there are some (ex-*Eagles* perhaps, or even *Victorys*), who would dispute the rather subjective sub-title 'Britain's Greatest Warship'. (Anyway, shouldn't we all hold that our present ship is the best ever ?) No. If I had had the naming of the book the title would have been *The Mighty Ark* and the sub-title 'The story of the Royal Navy's fourth Ark Royal'.

I mean no disrespect at all to Richard Johnstone-Bryden when I suggest that he is not so much the writer of the book as its compiler or editor for, very sensibly, he has allowed *Ark Royal*'s people, over her successive commissions, to tell their own story. Thus, for me, the most important two pages of the book are those listing the acknowledgments. All her Captains are there, with special mention of Admiral Griffin's encouragement for the book in its early stages and before his own, sadly early death. The Fleet Arm is, of course, there in force, with an evocative list which will make the book a 'family' thing for 'the Branch' and which recalled for me how proud I was to serve with them in several appointments. There are lots of 'Fishheads' too, of (literally) all ranks (Admiral of the Fleet Sir Michael Pollock wrote the Foreword), and many ratings have contributed as well. Finally there is a record of the very wide research which the author made among the official archives and associations.

The story starts with the sinking of the third *Ark Royal* and moves swiftly on to the inception of the fourth. Typically, the account of her building is enlivened by the memories of those concerned with it: of Jack Wilson, for example, the manager of Cammell Laird's south yard, and of Neville Lear, the head foreman fitter. And perhaps this is the moment at which to mention the excellent collection of photographs with which the book is illustrated, because one of those covering the *Ark*'s building is E. Chambré Hardman's breathtakingly beautiful picture of a little boy walking down Holt Hill in Birkenhead with, in the misty background, the ghostly, white-painted hull of the *Ark* among the shipyard cranes, awaiting her launch.

Christopher Dreyer was *Ark*'s first Commander, and I found his account of the initial setting-up of the great ship's organisation enormously interesting. Then Captain Dennis Campbell joined in command: 'The next eighteen months were to be the high point of my time in the Navy.' (I can believe it, Sir.) And then, after no less than twelve years in construction, the full ship's company joined and, on 22 February 1955, she commissioned for the first time.

That commissioning is described at the beginning of Chapter 2; and from then until the end of Chapter 10, there is a continuous, spell-binding 'Report of Proceedings'. Such a narrative over so long a period – (*Ark* entered Plymouth for the last time on 4 December 1978) – must be in danger of repetitiveness – tedium even; but this is never the case here; for although a ship's job remains largely the same throughout her life (and one major exercise is not all that different from another), the incident here is always fresh because it is the story of the *people* concerned, told by the people themselves. Thus the book will not only be of interest to old-*Arks* looking back at their own commissions, but I am quite sure they will find fascination in comparing their own experience with that of their oppos in the other commissions.

That statement could be taken to imply that

I think the book will only interest those who actually served in the great ship. Perish the thought! It is a book which I believe will interest *all* who love the Navy: the older generation looking back to 'their' days, the present one comparing (dare I guess wistfully?) the lot of their fathers' with their own, the naval historian with real gratitude.

The Twelfth Chapter is about *Ark Royal*'s end: her destoring and scrapping, and the ideas which were mooted at the time for preserving her for posterity. The human interest is maintained to the end: her last Commanding Officer was, fascinatingly, a supply officer commanding a carrier in full commission. Chapter 13 lists and describes *Ark*'s aircraft over her 23 years' service; Chapter 14 is devoted to 'Details'; Chapter 15 provides a brief history of the previous three *Arks* and of the present one – the fifth to bear the name; and the final Chapter, 16, is a brief 'think-piece' on the future of the aircraft carrier.

I am delighted to have this book on my bookshelves. At £20, I – who think hardbacks nowadays are generally much too expensive – recommend it warmly for yours.

PETER KIMM,
CAPTAIN, RN

THEATRE MISSILE DEFENCE

ed. ROBIN RANGER
(Bailrigg Study–1, University of Lancaster, 1998 – £9.95)

These Proceedings are of a conference staged by the RUSI and the Centre for Defence and International Security Studies at Lancaster. They carry the missile defence debate forward to an extent. Not least is this because the 14 presentations are spread across two days, not the 12 or 15 between breakfast and supper so modish in these times of publish-or-else. Also, a calm and collected tone was set this year by the opening remarks of Alun Chalfont and Richard Cobbold.

Statements by Jon Day and Michael Rance spell out more clearly than any hitherto Britain's current policy on Theatre and Ballistic Missile Defence (TMD/BMD) and the philosophy that informs it. Similarly instructive is the cautionary stance adopted by Mike Henchen, a US paratroop colonel on the NATO staff. His plain message to all and sundry is: do not move ahead with TMD unless and until you are clear about what you are aiming to achieve.

Salutary, too, are comments by William Schneider of the Rumsfeld Commission and by Duncan Lennox about how missile proliferation proceeds within the developing world in this information age. It is networking with a vengeance, much of it reflecting deep ambiguities in terms of geopolitical and philosophic orientation.

The Egyptian case, as indicated by Duncan Lennox, struck me forcefully. It did so because I well recall as a young journalist returning from Aden in 1966 courtesy of RAF Transport Command. One of the two insurgent movements our troops out there then faced was backed by an overtly radical regime in Cairo under President Nasser. Yet our VC-10 was cleared to overfly Egypt, a contradiction we reporters were expressly asked not to mention. Now we have in Cairo a centrist government aligned much more towards the West. Yet it appears to have had proliferation links with North Korea.

One implication of all this is that surface-based TMD will likely be placed under impossible strain within a decade or so. This will in part be because of the advance of the cruise missile along with cruise-ballistic hybrids. Both Lennox and Schneider well appreciate that the ballistic genre has had more of a macho appeal so far as the proliferators are concerned. The fact remains, none the less, that cruise missiles will assume a salient place in any offensive mix designed to be truly effective. Unfortunately, these Proceedings oscillate, as other studies have done, between (a) treating cruise *pari passu* with ballistic and (b) trying to forget their very existence.

Still more to the point, however, is what informed opinion is coming to see as the inexorable dissemination of multiple warheads installed in offensive missilry, especially the ballistic kind. A heavy premium is thereby placed on interception boost phase, before the warheads borne by each rocket have been dispersed. In which connection, the least helpful remark anywhere in this

transcript is one made by Larry Nork of Lockheed Martin. He asserts that warships deployed well forward could intercept offensive rockets during their ascent 'in just the areas we anticipate needing TBMD the most'. Always? What about, let us say, Beijing's missile threat to Taiwan? It would be a cinch for the Chinese Communists to locate their launch pads well outside the intercept range of any vessel in the intervening straits.

As a rule Boost Phase Interception (BPI) need to be airborne as may action against sea-skimming cruise missiles. The Proceedings include a most informative paper by Chris Lewis of Matra-BAe Dynamics on BMD by means of airborne mini-missiles. But the AirBorne Laser (ABL) nowhere receives more than incidental mention. Moreover, there is throughout a disposition to depict airborne missile defence as inherently ancillary. What can be allowed is that it may fail to progress either in terms of operational performance or else because the 'death ray' connotations of lethal laser beams projected from above become unacceptable politically. On how things pan out on that score may hinge the future of active missile defence. Meantime, this whole subject area is one in which the options and the acronyms rain down all too readily. They must not be allowed to distract us from some straightforward questions.

NEVILLE BROWN

AMERICA AND THE SEA: A MARITIME HISTORY

by BENJAMIN W. LABAREE, JOHN B. HATTENDORF and four others
(Mystic Seaport, 1998 – $65)
ISBN 0 9133 7281 1

Of all the nations in the world, of all the navies, the affinity that most Britons and certainly most of the Royal Navy would affirm most strongly is that with the United States of America. And yet most of us are woefully ignorant of that nation's history, even – and perhaps particularly – in its relationship with the sea. The volume under review provides an opportunity to rectify that deficiency.

It would be improper to begin without touching on the physical attributes of the work. Marginally larger than A4 in format with nearly 700 pages and many illustrations, it weighs over 2kg, the limit of my postal scales. So this is not a book for filling in the odd moment on a train journey. For this readership, too, it is right to point out that it is a maritime and not a naval history, although with Professor John Hattendorf of the Naval War College as one of its six writers, this aspect is hardly neglected. Perhaps, too, it does no harm to blur the lines a little between these two categories which often suffer from over-rigid separation. Put another way, there is no known instance of a nation with a naval history that does not also have a significant maritime one.

The book has four main sections dealing with American maritime history in chronological order: up to 1815, 1815 to 1865, 1865 to 1939, and from thence to the present day. All aspects are covered by chapters within these with frequent sidebar boxes. Illustrations are copious but perhaps provide the only significant general criticism of this work. Their captions are often informative, sometimes lengthy, and thus the coloured italic script used becomes a little tedious, sometimes even difficult to read. Charts are clear and informative.

The early history of the United States is bound up if not with coastal settlements then with those reachable by rivers. In a sense this was even more marked for America than Europe. In such a climate of development sea-sense was not just desirable but essential. The period reached several sorts of climax especially in terms of building the nation, in the Revolutionary war against Britain beginning in 1776. Although often remembered as a land war, its key theatre was the sea, representing the principal British vulnerability in the length of its logistic tail. The war was fought hard at sea, on the freshwater lakes and even in British waters. The period gave rise to a specific genus of ship, the large frigate.

The years to 1865, although terminated in the tragedy of civil war, were largely marked by the turmoil of development; national as the

USA pushed westward using the river system and transfer to the west coast using routes around Cape Horn; technical as the twin revolutions of steam and steel changed ships, both naval and merchant, for ever. The blind alley of the ironclad ram saw several American examples and the civil war saw both the first duel between what would be regarded as modern warships and the first essay at the submarine. An early appearance of the mine also occurred – Farragut's damned torpedoes.

The third period is largely perceived as one of growing professionalisation although it is hard to see how a nation such as the USA would have reached its 1865 position entirely on amateur enthusiasm. A useful side-essay commemorates Scripps and the oceanographers. Militarily the main event of the period was the Spanish-American war leading to the terminal decline of the first nation and the gaining of unasked possessions in the Pacific by the second. The Panama Canal was a triumph of both engineering and national strategy, permitting the possibility of a swing strategy in the century that followed its opening. The First World War gave America an initiation into 20th century naval warfare and although her efforts were hardly insignificant, many aspects – such as mass merchant shipbuilding – were barely in gear by the end of the conflict. The period also saw pioneering submarine efforts and the last two decades were witness to strong progress in naval aviation.

The final portion, from 1939 onwards, is probably most familiar, although American assistance to Britain well before formal entry into the war may be less so. Perhaps the thing that needs most note here is the huge material contribution that the USA brought to the alliance not least in terms of ship building. Despite the initial setback at Pearl Harbour, the USA was able to establish a position as the world's leading power for at least the next half century.

This is not a book to be read at one sitting, or indeed at just a few. It is to be dipped into, although dips of some length may be required. Nor is it a definitive history of the United States Navy, although that subject is tackled with rather more than competence. On that the books of George Baer or Robert W. Love should be consulted. But the whole volume provides a wonderful and learned panorama of America's relationship with matters maritime in the broadest sense: mercantile and naval; ocean, littoral and internal waters. Excellent value and thoroughly recommended – always providing that you are strong enough to lift it.

W. J. R. GARDNER
LIEUT. CDR, RN

SEAPOWER AND NAVAL WARFARE 1650-1830

by RICHARD HARDING
(UCL Press, 1999 – £13.95 paperback)
ISBN 18 7572 8478 X

This is an unusual and ambitious book in which Richard Harding aims to explore the idea of seapower rather more conceptually than is usually done. His focus is on the grand strategic level of war and the book is therefore written at a high level of generality. There is little illustrative and/or telling detail on the tactical (and technical) or operational level – so this is naval history without the excitement, smoke, trumpets and gunfire – despite the fact that his period of interest (1650-1830) saw Britain almost continually at war. Instead Richard Harding seeks to explore what seapower meant, what were its constituents and how important it was in deciding the fate of nations.

Accordingly there's a lot of really quite exhaustive examination of what later maritime theorists would call the 'elements' of seapower. Building and maintaining a battle fleet was the biggest industrial project of the 18th century world and was hugely demanding in human and material resources. For this reason, seapower especially in the early days involved a large scale reliance on entrepreneurial maritime activity which derived in great measure from the maritime nature of the state. A country which benefitted from a helpful maritime geography and which possessed a thriving merchant marine, or fishing fleet, could deploy a kind of free-enterprise entrepreneurial maritime power. Typically this resulted in the maintenance of a

large force of privateers which could be surprisingly effective even against the defensive strengths and manoeuvres of the most determined battlefleet. Indeed, Harding shows just how difficult it was for the battlefleet to get this menace under control, even at a time of dominance at sea.

But deploying a 'proper' battlefleet was something else: it was an ambitious aspiration, which only a centralised and moderately efficient national state would hope to deploy. The British, in effect, were the first into the field and dominated the scene throughout the period, only briefly losing momentum during the American War of Independence. Harding shows the constraints faced by Britain's rivals notably the French, always distracted by the requirements of the defence of their land frontier, who were therefore more or less obliged to focus on the 'guerre de course' and to go in for a form of maritime warfare which broadly sought to avoid full scale decisive battles against the British. But Harding also shows the limits of the Royal Navy in bringing effective maritime power to bear on France. Much of its maritime trade went on without decisive interference.

Even so, through the 18th Century, other European countries followed the British lead and established battlefleets, centred on the line of battleship which by the end of the period became synonymous with seapower.

The British were able to maintain this lead throughout the period because this battlefleet was securely founded. In Harding's words 'That seapower lay not just in the navy or battlefleet, but in the effective integration of her administration, political system, army, colonies and maritime economy towards the ends of the state' (p.286). None of Britain's rivals were anything like so well placed and Britain was only briefly in trouble when in effect they all allied, temporarily, against her during the difficult and demanding War of American Independence.

Beneath this grand survey of the evolution of seapower at the overall strategic level, there is a great deal of supportive scholarship. Harding summarises a great deal of the established literature and has produced a book that may well come to be regarded as the standard work of reference for the whole period. It is intended first to put everything together, and second to show that across Europe the trend lines were all pointing in the same drection – only some nations were more in advance of others.

Perhaps inevitably, there is a downside to this grand review: it is written at a broad strategic level which leaves the reader with a fairly dissatisfied feeling that a few more telling details might have helped us separate the wood from the trees more easily. Nonetheless, readers prepared to dig around in the text will come across a good deal of material that will enrich understanding of what the elements of seapower were at a time when, across Europe, seapower was developing into forms that are familiar and indeed almost unchallenged nowadays.

Harding is also useful for pointing out some aspects of his subject which still need further study. For instance, to what extent was seapower, based on the battlefleet comprising line-of-battleships, actually a precondition for the successful attack and/or defence of trade? How effective, in economic terms, *were* the commercial blockades based on battlefleet supremacy in bringing Britain's victims to heel? One of Harding's conclusions, in fact, is that many aspects of the seapower of this earlier period still need significant study. His book though too dense to be an easy read is an important pioneering contribution to this need.

GEOFFREY TILL

MARITIME SUPREMACY AND THE OPENING OF THE WESTERN MIND; NAVAL CAMPAIGNS THAT SHAPED THE MODERN WORLD, 1588-1782

by PETER PADFIELD

(John Murray, 1999 – £25)
ISBN 0 7195 5655 4

Peter Padfield is a fine historical author, possibly even a great one, who has already written two distinguished volumes on the period in question, and has a third on the way. Your reviewer thus picked up this book with some enthusiasm, looking forward to a readable and competent historical account, but at the same time wondering if the author had

found anything new to say.

In terms of readability, authority and balance, I was not disappointed. Padfield has produced an ambitious book, seeking to draw together the maritime histories of seven nations over a period of two hundred years, to tell their stories and account for why some were more successful than others. He has not chosen any slack period of history: the book covers the rise and fall of the Dutch United Provinces as a great power, the decline of the Bourbons, the ascendance of Britain and the birth of the United States of America. Moreover, he has not simply attempted the operational history which one might have expected, but has included brief analyses of the military fiscal industrial complexes of the involved states, and has discussed their Governments and social structures. All this he has done with a remarkable degree of success, giving the book a chronological structure, but finding space within that framework to provide well constructed thematic analyses. If one has to find a criticism, it would be in balance; I found the blow by blow accounts of selected battles diverting and unnecessarily detailed, but that is a tiny criticism of a substantial work.

On the second question of what he has found to say that is new, I was left feeling less satisfied. In the introduction the reader is promised an examination of why certain powers were, and are, more successful than others. The thesis is suggested that a largely maritime state will be dominated by the mercantile rather than the landed interest, and so will develop social and governmental systems both more fluid and more liberal than those of a continental and dynastic power. This, the thesis continues, will lead to accelerated innovation, consensual government, economic strength and, ultimately, military ascendance.

This is an attractive thesis and I looked forward to seeing it tested, particularly as Padfield early acknowledges those who might accuse him of determinism and 'another vain attempt to construct a general theory of history'. On closing the book, however, although my comprehension of the general history had been greatly improved, I felt that the test had been half hearted, and certainly not sufficiently rigorous to be described as decisive.

Yes, the maritime powers examined in the book (the United Provinces, Britain and the United States) had been generally more successful than the continental ones (the Habsburgs and Bourbons), but Padfield himself states that that success was caused by more complex factors than those suggested by the thesis. The United Provinces, as a fledgling nation, was unencumbered by debt at the beginning of the period, as was (substantially) Britain, unlike the continental powers, which had gone a long way to bankrupting themselves through war in the sixteenth century. Britain had a moat, and so, to a lesser extent, did the Dutch, in the floodable polders. Indeed, to quote Sir Lewis Namier, 'a great deal of what is peculiar about English history is due to the obvious fact that Britain is an island'. A closer examination of the Habsburgs, and a look at the Ottomans might also have thrown further light on the argument, but would admittedly have been outside the scope of the title. This, however, is not the place to argue the point; I would merely invite you to buy the book and draw your own conclusions.

Notwithstanding these reservations, I do thoroughly commend the book as a broad, thorough and most readable historical survey. Anyone who is interested in maritime history, and if you are reading this you ought to be, but is not sure who won the Dutch Wars or what the South Sea Bubble was all about will not get a much better return on £25 and a few hours' reading.

G. D. FRANKLIN
LIEUTENANT, RN

THE US NAVAL MISSION TO HAITI 1959-1963

by CHARLES T. WILLIAMSON
(US Naval Institute Press – $36.95)

There is a wealth of literature on small, limited naval and maritime operations. Most works focus on the activities of ships and marines units. Relatively rare are accounts of naval service personnel – navy and marines – deployed as individuals or small teams. This

makes Colonel Williamson's book unusual and welcome. He was a member of the US Naval Mission to Haiti (actually mainly a Marine Corps mission) in the early years of the notorious 'Papa Doc' Duvalier's regime. But this is much more than just an account of his personal experiences – indeed the author himself features much less in the text than his position probably warranted. Williamson draws on documentary sources and extensive first hand accounts as well as his own recollections and perspectives, to give a fascinating view of a little-known and largely unsuccessful episode in US naval history.

The US Marines have been to Haiti many times, most recently in 1995. The United States ran the country for nearly 20 years in the early part of this century. When Duvalier came to power in the late 1950s, he sought US military aid to – as the US thought – reform and modernise the Haitian army. In fact, he was more interested in help in establishing personal control over the main potential threat to the dictator's position. This was the era of the 'domino theory' and the fight against communism in the Third World. With Castro newly established to the west, the US government was anxious that Haiti should not go the same way. As elsewhere, notably in Central America and the Far East, America ended up supporting a local tyrant little better than the alternative.

This is the full story of the Mission that quickly became embroiled in Haiti's web of repression, brutality and conspiracy. Such success as the training teams had was wasted when the most promising Haitians, tainted by association with Americans, fled the country or were murdered by the infamous *Tonton Macoutes*, Papa Doc's quasi-secret police. Williamson is bitter about the wasted opportunity to improve the lot of one of the poorest countries on earth, and dismissive of his government's policies which allowed the mighty United States to be exploited by Duvalier. It is nonetheless an objective and informative story, and an object lesson in the pitfalls inherent in getting involved in other people's little-understood problems.

J. R. STOCKER,
LIEUT. CDR, RNR

THE TIMES GUIDE TO ENGLISH STYLE AND USAGE

Compiled by TIM AUSTIN 1999
(*The Times* – £11.99)
Available from *The Times* Bookshop on 01326-374300)

I fear that this may set me aside as a bit of an 'anorak' (not a recommended cliché – but then clichés are 'to be resisted strongly in almost every context'), but I enjoyed reading this book. No wordsmith should be without a copy, even if they only keep it to read in the loo. The Compiler is the Chief Revise Editor of *The Times* and his job 'entails scouring the paper for all kinds of errors – factual as well as spelling, grammar and tone'. This brings him into 'daily contact with the commonest solecisms and lapses of linguistic concentration' and his aim, in this book, is to alert *Times* journalists to the pitfalls that readers will surely point out if they miss them.

The body of the guide is alphabetically arranged and mixes grammar, spelling and stylistic policy. As an example, page 130 covers 'straight-faced but note straightforward'; 'Strait of Hormuz, Strait of Gibraltar, Strait of Dover (not Straits)'; 'Streisand, Barbra'; sub- like multi-, the hyphen here is often a question of what looks better. A random sample gives us *subdivision, sublet, subnormal, subsection, substandard, subtext;* in contrast, *sub-committee, sub-editor, sub-postmaster, sub-post office* etc. See hyphens, multi-; and over the page 'submarine always a *boat*, not a ship. See boat, ships, serve in'. The final sections cover The Armed Forces, The Arts, The Churches, The Courts, Politics, Sports and Titles. There are several errors in the Royal Navy section (including, unsurprisingly, Union Flag/Jack), but Mr Austin has promised to correct most of them in the next edition.

The generational gap – between those who were taught formal grammar ('in their forties and above') and the rest – is balanced by the ready admission that the older generation must 'be ready to adapt to new terminology and not to become encrusted in a mould of linguistic inflexibility'. As is probably clear by now, I would strongly recommend this book to everyone who ever has to write for their living

– which surely covers every Member of *The Naval Review*. I will leave the final word to Tim Austin – 'Language is important. It can help you to find a job – and keep it; used properly, but not pedantically, it can give your image a boost; it can give you self-confidence. But you need to think about it, to work and not to give in to its easy temptations'.

ANDREW WELCH
COMMANDER, RN

CAMERA AT SEA
The History of the Royal Naval Photographic Branch

by NEIL MERCER
(Airlife – £24.95)

As well as being a well researched history of the Photographic Branch this book serves as a pictorial reminder of many significant Naval occasions of the last fifty years or more.

When considering the work of the branch since its birth in 1919, mainly for gunnery recording duties, it is easy to be influenced by its recent achievements in the increasingly important field of public relations and to overlook its operational tasks – a 1997 DCI lists nine primary and secondary ones from intelligence collection to weapon firings and hydrographic surveying. The historical text which forms the first half of this well-produced volume gets the balance right although it is a bit thin, understandably, on pre-WWII pictures. The development of the Branch, its various headquarters and its achievements in peace and war are well described and supported by some fine examples of the photographer's skill. A shot from the flight deck of HMS *Hermes* listing heavily after Japanese air attack in 1942 was one of a series on a film quickly extracted from his camera as the ship sank beneath him by a photographer who then spent six hours in the water. The film was not irreparably damaged and the images when finally released in 1945 were widely acclaimed. There are some fine pictures of great historical events ranging from the war leaders framed by the guns of a battleship to the signing of the surrender treaties, including the South Georgia one familiar to many. Milosevic and Karadic also feature. Aviation, unsurprisingly, gets good coverage and there are some spectacular flight deck accident shots, happily rare events today.

The Falklands conflict gets a chapter to itself and rightly too. The Naval Photographers attached to the Task Force produced the only real time visual record and many of their pictures were published in the world press. Petty Officer Holdgate's photograph of 45 Cdo. marching to Port Stanley with a Union Flag flying from the nearest marine's radio aerial must rate as one of the British press shots of the century.

The author's dissatisfaction with the way that the Photographic Branch has been treated in the era of delegated budgets and stringent Defence cost reviews surfaces strongly in places and evokes the reader's sympathy, even if his criticism is a bit unfocussed and fails to recognise the support for the branch which exists at all ranks within the service. MOD officials, in clearing the book for publication, distanced themselves from the author's views though his 'impassioned plea for the retention of the Photographic Branch' as their statement described them seems justified in the light of the Branch's contribution to the prestige of the Royal Navy and the UK throughout the world.

The Colour Portfolio 1985-98 which forms the second half of the book is a fabulous extravaganza of photographic professionalism. Yes, Naval business is highly photogenic but it required artists to create these images. Anyone in need of reminding about the sheer spread of RN activity and influence need only peruse this collection – Tower Bridge and *Britannia* with a halo of fireworks contrasting starkly with a shot of a Royal Marine Officer on UN duty in Cambodia standing behind a pile of skulls of Khmer Rouge victims. The whole Navy is here, people and ships, aircraft and submarines, places and events. But what stands out most clearly is the creative excellence of the pictures, not least the author's own work in fixed-wing aviation.

HMY *Britannia* provided a rich source of material throughout her life – not just a very pretty ship but a hardworking one too. The *Britannia* photographic archive of a hundred thousand images entirely the work of Naval photographers is now in safe keeping at

Windsor Castle while the Imperial War Museum is taking the main archive of nearly a million photographs from their present storage at Tipner – worthy homes for such treasure.

The Royal Navy has been well served by its photographers and this book provides ample evidence that their front line task is not one that can be 'contracted out'. The author's swipes at the establishment can be forgiven because he has put together a rattling good tribute to a highly professional group of Naval people which will hold its own on any naval bookshelf or coffee table. Well worth the price.

JOHN WEBSTER

THE FIGHTING COMMODORES
Convoy Commodores in the Second World War

by ALAN BURN

(Leo Cooper, 1999 – £19.95)

Freetown, December 1939. Homeward-bound convoy SL13 had been assembled. At the convoy conference a long-since retired Lieutenant Commander RN, recalled to be Naval Control Service Officer, spelt out to the ship masters, chief engineers, signalmen and radiomen what they needed to know; and the Convoy Commodore, a long-since retired Rear Admiral, issued his stern warnings against making smoke, 'romping' ahead or 'straggling' astern. The atmosphere in the crowded, makeshift centre was hot and sticky. 'Any questions?' asked the NCSO, confident that everything had been covered. Silence. He began to gather his papers. Then from the back came a querulous voice: 'Iz it zat ve all sail togezzer?' Apocryphal? Well, your reviewer was there, being Navigator of HM submarine attached to that convoy. At a speed of 7½knots the diesels were 'on the cobbles' for the 19-day passage. Bad enough, but what about the merchant ships in which 'revolution counters were unknown and orders for small alterations of speed took the form of verbal requests from the master to the chief engineer, relayed by word of mouth by the junior apprentice'?

Alan Burn was the head boy of Winchester College when he left to join the Royal Navy as an Ordinary Seaman on Atlantic convoys. He was commissioned and became Captain 'Johnny' Walker's Gunnery Officer in HMS *Starling*. Having written *The Fighting Captain*, a first rate biography of that ace of U-Boat killers, Burn has now given posterity an inspiring record of the Commodores who had 'The direct charge of the conduct, manoeuvring and general proceedings' of the convoys which the U-boats were attacking. These men included, besides the retired flag officers, Captains RNR, long experienced in the facts of merchant service life, in which the Masters 'upheld discipline by sheer character and personality, for their powers of discipline under the Board of Trade Regulations are almost non-existent.' But all the Commodores had much to learn, because, despite the Naval Staff's comprehensive planning for the introduction of convoy on the outbreak of war: 'Not one exercise or rehearsal of a trade convoy, with merchant ships of different nationalities and warships operating together without lights under simulated attack was carried out in the interwar years.'

This book constitutes a treasure-house of convoy lore. Even so, there is an element of Lower Deck/Wykehamist radical chic in Burn's scathing comments on the narrow harshness of the Dartmouth education which sit uneasily with the devotion to duty, intelligent leadership and adaptive skill shown, to a man, by the elderly retired admirals who went back to sea as Commodores of convoys, coastal, ocean and, most testing of all, in the Arctic. Also, since the seaborne supply of Britain could once again be terminally threatened, members of *The Naval Review* may care to ponder the following: 'One of the major German errors was to go for the merchant ships rather than the escorting warships; if they had sunk escorting warships in preference to merchant ships right from the start of the war, the convoys would have been unprotected and they could have picked off the merchant ships at will.' What about maintenance of the aim?

IAN MCGEOCH

THE CAPTAIN CLASS FRIGATES IN THE SECOND WORLD WAR

By DONALD COLLINGWOOD

(Leo Cooper – £19.95)

As is well known Britain started WWII

woefully short of ASW convoy escorts. Add to this the rapid collapse of France which not only removed a key maritime ally but enabled U-Boats to be based in the Biscay ports and so extend their operational range. A belated crash building programme started in the late 30s was to produce 'Flower' class corvettes (a trawler type hull equipped for ASW) and Hunt class Destroyer escorts (AA and ASW equipped but with limited operational range for the Atlantic). Shipping losses were very serious but happily Churchill was able to negotiate a lease-lend agreement with the USA by which ships and aircraft were loaned in exchange for British bases such as Bermuda. First to be transferred were 50 elderly USN WW1 destroyers known as '4-Stackers'. The next convoy escorts came from a huge USN warship building programme some of which were allocated to Britain and Canada.

The DEs for the RN were built in the Boston area as part of the USN order. Initial build time was up to nine months but using mass production methods was later as quick as three months. The first RN DE was completed in January 1943 and the 78th, and last, was commissioned in the Spring of 1944. In the RN these DEs were known as 'Captain' class and were named after Nelson's Captains or famous earlier ones. With a crew of 180 they had either diesel/electric propulsion (20 knot maximum) or turbo/electric (24 knots). ASW weapons were Depth Charges and Hedgehog (ahead throwing mortars). The AA close-range armament was good but the dual purpose single 3" guns packed little punch. The USN radar was good but RN compasses and sonar were fitted in UK as soon as feasible.

The author of this well researched and most interesting book served as Ordnance Artificer in a 'Captain' for 2½ years after standing by building at Boston. He well describes the many problems of manning overseas a foreign designed warship with a new crew, many of whom had yet to go to sea whilst even the experienced ones had to learn to operate unfamiliar equipment. After commissioning there were many stages before a DE was fit for war. Under USN guidance one week's sea trials off Boston was followed by a week's initial work up further up the Maine coast. Thence to Bermuda for a three week work up before joining a convoy escort en route to UK. Finally, as operational requirements allowed, new 'Captain's went to Belfast for essential modifications to be made. This three week period also allowed home leave. Important amongst the 100 or so As & As were RN gyros and 144 sonar, improved Communications and Depth Charge handling arrangements. An amusing domestic one was bringing the Heads up to RN standards – the USN provided 'troughs'!

After Belfast ships were then deployed as needed either to supplement existing Escort groups or to form new 'Captain' class Groups. Later they were moved around as needed. The author has done detailed research into operations carried out by all Groups containing a 'Captain' class ship. Nine chapters out of the book's 12 are devoted to this with many verbatim comments from the 300 wartime crew members he has consulted. This book is good reading for anyone who took part in the convoy battles or is interested in them. Do not be put off by some of the introductory remarks about policy etc. The main interest is the complexity of commissioning overseas and the continued war against the U-Boats with detailed accounts of many actions with live quotes. The 'Captains' took part in the sinking of 36 U-Boats and lost 27 of their class and 700 lives.

As light relief let me summarise the post war surrender of a U-Boat which was surfaced and awaiting a boarding party from a 'Captain'. Watching the ceremony from nearby was the ASW training yacht *Philante* loaded with newsreel cameramen.

> 'We crowded into the boat armed to the teeth with rifles and sub-machineguns . . . the sea was choppy . . . we bobbed alongside the U-Boat casing unable to get out laden as we were . . . a resourceful matelot handed his gun up to a bemused German and we all followed suit. We climbed on board easily and were given back our guns and then formally took the surrender.'

The watching Admiral was not amused.

SPENCER DRUMMOND

IN HARM'S WAY

by BRIAN JAMES CRABB
(Paul Watkins – £19.95)
ISBN 1 9002 8902 4

In Harm's Way is the story of HMS *Kenya* and is a prime example of what is now called, sometimes unfairly I think, 'vanity publishing' – but the real significance is probably that no fully-commercial publisher was prepared to take on this work.

The author of *In Harm's Way* is the son of a member of *Kenya*'s wartime ship's company and the book is mainly aimed at the members of the Kenya Association. Brian Crabb has attempted to write in the naval vernacular, but as with anyone writing in a language that he has never actually spoken, this is a difficult act to get right and he doesn't succeed. Ships are sometimes she and sometimes it; HMS is used randomly; add in the fact that several of the apocryphal stories (target towing aircraft pushing not pulling, Luftwaffe Condor being asked to reverse direction because he was making the lookout giddy etc) are included as having actually happened to HMS *Kenya* – these anecdotes many improve the story, but this is supposed to be an accurate history.

This book is, obviously, very thoroughly researched. The author has read every available document about HMS *Kenya*'s life that he has been able to find (he notes that the ship's log of Nov 52 is missing), but he has not been particularly discriminating with the mass of data so accumulated – I doubt that sailors' official numbers are of interest to even the old Kenyans. However, one area where this book does do well is the impression of what life was like in a wartime cruiser and of how little time was actually spent in action. I think it is easy to forget, even for those who have served in the various post-war conflicts, how much of 'wartime' is spent in inaction, training, maintenance, routine patrolling or escort work and then more of the same. Crabb's book does bring out well the relentlessly boring nature of so much of war.

I cannot recommended this book to members (unless you served in HMS *Kenya*, in which case I'm sure you already have a copy) – the language grates and the facts are larded with too many 'good stories'.

ANDREW WELCH
COMMANDER, RN

AND SOME WERE LUCKY

by GEORGE UNDERWOOD
(Linwood Books, 129 Lincoln Way, Corby NN18 9HW – £6)
ISBN 0 9529 1320 8

THE BOSUN'S CALL

by HUGH WILLIS
(Pentland Press – £16)
ISBN 1 8582 1615 X

These autobiographical books have much in common in their background – the messdecks of HM Ships – less in the period they cover, and even less in style. But both will prove rewarding to the naval reader.

George Underwood was a young Stoker in 1940 and volunteered for submarines, partly for the extra pay and partly for the comradeship he expected, and found, in the boats. After a brief spell in *Otway*, he joined P212 building in Birkenhead. She became HMS/M *Sahib* under Lieutenant John Bromage, and the first 45 pages of the book are a graphic account of her Mediterranean patrols in 1942 and early 1943. They were successful, and included the sinking of U-301, running on the surface at the time.

But in April 1943 the luck ran out, and *Sahib* was sunk by the Italian escort *Gabbiano*. Most of the rest of the book is an account of Underwood's time as a Prisoner of War, first in captivity in Italy and then (dangerously for him, because the Germans suspected him of possession of secret information) Germany, then back to Italy, then as an escaper. For the best part of a year Underwood was on the run, harboured by a succession of Italian farming families often at risk to themselves, in the eastern part of Italy. Clearly he greatly endeared himself to them by his willing and friendly help in all the operations of the farms. Eventually he was given the means to go south and meet the advancing allied forces. Repatriated – after some fierce interrogation – he rejoined the submarine service and left the Navy in 1952. In 1960 he revisited Italy and met many old friends.

This most interesting and exciting story is

told over the final 100 pages of the book with an immediacy and freshness that make it compelling reading. Readers are not likely to be put off by occasional lapses in proofreading or syntax: most will be, as I was, carried along.

Hugh Willis was a good ten years younger than Underwood and did not join the Navy until 1949. His father served in the RN during the Second World War though, and throughout an often stormy family life Willis felt the call of the sea. He was not then academically inclined and went to a curious nautical training establishment near Hamble, from there joining the Navy as a Naval Airman at 16½. He quickly engineered a transfer to Seaman and became a *Ganges* boy.

His account of *Ganges* training tallies with many others from that time, but is singularly lively and entertaining without pulling any punches. Then off he went to his first ship: *Loch Scavaig*, Mediterranean station, Commander Williams; First Lieutenant, Lieut. Cdr Joseph Bartosik.

The next 110 pages, covering this commission, are the meat of the book and are hilarious. By no means are they all Bartosik stories, though there are plenty of those and Bartosik's relationship with 'Villis' was notable not only for its underlying mutual respect but for its humour. The story of how Willis escaped from servitude as Captain of the Heads, in the space of three weeks, is a classic.

But that is by no means the extent of anecdote. Messdeck life – still in the days of canteen messing – and goings-on on the bridge, and of course runs ashore, are all treated with a felicitous touch. Either Willis has a perfect aural memory, or he is very good at inventing direct speech; much of the *Loch Scavaig* section consists of conversation and the words ring true.

The rest of the book continues in the same lively style, though the jobs were not so noteworthy, until Willis's enrolment in the Chatham Field Gun's Crew of – one supposes – 1953. Here, doing well under the menace of severed fingers and squashed limbs, he was spotted by none other than Lieutenant Kimm (Willis spells it Korean-fashion with one 'm') and persuaded to become an Upper Yardman candidate.

It was a fair progression. Willis had always, by his own account, been an unusual figure on the messdeck; although he fitted in, he talked posh, he was a 'toffology rate'. Once the hurdle of mathematics was cleared, he overcame the other obstacles with relative ease, and the book ends with his appointment as an acting sub-lieutenant.

No doubt there will be (at least) one more to come. We should all look forward to it.

Both books are highly recommended.

RICHARD HILL

TOTAL GERMANY

by GEORGE LUSCOMBE
(Pentland Press – £8.50)
ISBN 1 8582 1637 0

This is a curious book. It purports to be (according to the back-cover blurb) a 'well-written and fast moving account of an intriguing aspect of the war at sea. It unravels the mysteries of wireless telegraphy. . .' It does not, alas, live up to this description, yet it does have interesting details concerning the author's experiences. He was a Leading Telegraphist and Petty Officer Telegraphist in HMS *Manchester* between 1938 and 1942, leaving her shortly before she participated in Operation Pedestal, in which she was sunk. While there is very little depth to the author's account of various incidents the ship was engaged in, nevertheless the atmosphere on board, and in the radio offices particularly, is convincing. I only wish he had continued the story after the war; he joined the Post Office Special Wireless Service, which became the Composite Signals Organisation, operating under GCHQ. But the book ends somewhat abruptly.

I could never describe this as a 'must buy immediately' book. But look out for it; you could well be able to read it in one browse in a bookshop – and enjoy it!

H. L. FOXWORTHY
COMMANDER, RN

ALONE ON GUADALCANAL

by MARTIN CLEMENS
(Naval Institute Press, Annapolis £26.95)
ISBN 1 5575 0122 X

The amount of literature on operations in

Guadalcanal from 1942 onwards is huge. This island in the Solomons, some 70 miles by 20, was the first place where the Japanese were held and then defeated on land in World War Two. Stories of US Marines coping with near-impossible conditions and displaying near-incredible persistence and heroism are legion. Like many critical battles, it was a damned close-run thing.

Martin Clemens was the British District Officer in Guadalcanal, and acting very much on first principles (he was no trained soldier) he formed and trained a large number of scouting parties and coast-watchers, obviously employing local islanders for the tasks. After the US Marines landed, he made contact, and – crucially – won their admiration and trust. Thereafter he had a position as the British Liaison Officer within their organisation. This book is based predominantly on his diaries; his dedication and common-sense are very evident, and I found the story enthralling. For example, the only way to get food once to one of his outposts was to do it by plane; they loaded up and flew through Japanese-infested airspace, and managed to drop the food required. Disarmingly, he mentions that this was the very first time he had ever flown, and that he hoped no Japanese would attack, as he hadn't the slightest idea how to use the gun! Again after months of deprivation and near-starvation, he was delighted to go on board a US warship and guzzle heartily; he couldn't get over the fact that the table was set – with napkins!

The scouts depended very much on their primitive radio; what with aerials, acid batteries, a charging engine (notoriously unreliable in hot wet conditions), fuel, some tools, spares etc, about ten men were needed to move it any distance. Yet they *did* manage to keep communicating, from even the deepest jungle where he hid – this was before the Americans arrived. He neither exaggerates nor plays down the horrendous conditions he endured, but to manage for many weeks without any footwear at all (his boots disintegrated) must have been grim.

One of the most uplifting aspects of the story is the fidelity of the Solomon islanders, who to a man kept faith with their colonial 'masters', the British – in sharp distinction from German and Australian-trained natives. There is no known incident of a Solomon islander betraying any British person – which says a lot for our colonial system and particularly the people who manned it.

Some of the maps could be better; Henderson Field, where the main US/Japanese fighting took place, is not featured, surprisingly. And there is an irritation; the first chapter is written by Allan R. Millett, an historian who met and spoke to Clemens – but it is nowhere explained what his connection really is. Further, the notes for this chapter appear immediately afterwards, instead of with all the other notes towards the end of the book; it took me some time to locate them! And I only wish there were more direct quotations from Clemens' diaries.

But these are minor criticisms. This is an inspiring, marvellous book. Get it and read it.

DESTINED FOR GLORY

by THOMAS WILDENBURG

(US Naval Institute Press, 1998)

This relatively slim volume of some 250 pages charts the development of dive bombing in the US Navy from 1925 until its spectacular success at the battle of Midway in June 1942. Indeed, the main premise of the book is that is was dive bombing, and only dive bombing, which turned the tide of the war in the Pacific. To make his point, the author covers the development of carrier aviation between the wars, starting with the first converted ship, USS *Langley* (affectionately called the 'Covered Wagon'), and her enthusiastic and far sighted CO, Captain (later Admiral) Joseph M. Reeves who had been a battleship expert, and who was quick to see the advantages of air power. However, his was not to be an easy road. Rather like the RN of that period, the entrenched proponents of battleship and heavy cruiser fleets were not going to be rolled over easily. It took many years, working through the USN annual practical 'Fleet Problem', to convince the doubters and earn the necessary funding for ships and aircraft. The strong parts played by Maj (later Lt Gen) Ross E. Rowell and Ernest

J. King (later CNO) are emphasised. Rowell was the main lead in developing the dive bombing, which was originally picked up from British pilots in the First World War. King did much in aircraft development and production.

The USN development of dive bombing started in 1926, and gradually gained the ascendancy over torpedo bombing because it proved to be much more accurate. It is a little unclear why the USN were so unsuccessful at torpedo delivery when others, such as the Swordfish at Taranto, enjoyed better success. It was undeniable, however, that ships underway found it more difficult to evade a diving bomber with very short bomb-flight time than a torpedo with a relatively lengthy run.

Much of the book is devoted to covering each particular mark of the many and quite varied test aircraft – bombers, torpedo bombers, and fighters – which were developed to various stages from the Curtis F6 Hawk to the SBD *Dauntless*, which made its name so well at Midway. The author explains, in parallel, the development of the next generation of carriers, *Lexington*, *Saratoga* and *Yorktown*. Progressively, it also covers the USN dummy attack on Pearl Harbour which was just as successful as the Japanese main attack later, and leads into the events in the Pacific that preceded Midway.

This is clearly a book for the enthusiast. For me, the emphasis is too much on the detail of each aircraft type rather than on other advances in carrier aviation and air warfare. The painstaking advances in aircraft technology are covered at some length – a veritable 'spotter's' delight. However, there are some interesting little insights within this detail, such as using a length of garden hose with a rolled-up message inside, and dropping it onto the deck to pass a message before radios were fitted to aircraft. The development of homing equipment is interesting. The book itself is well laid-out with some useful notes and a clear chronology at the front. It needs it, as the author tends to flit back and forth in time so that it is sometimes difficult to keep track of where you are.

In conclusion, the author quotes the four main reasons for success at Midway as dive bombing, the successful breaking of Japanese codes, Admiral Nimitz's bold tactics, and the swift repair of *Yorktown* after her earlier damage. He could probably have added reconnaissance, the constant role-changing on the Japanese side, and pure luck.

M. G. B. MANNING
CAPTAIN, RN

BRITAIN'S MARITIME MEMORIALS AND MEMENTOES

by DAVID SAUNDERS
(Patrick Stephens – £17.99)
ISBN 8 5260 0466 2

This companion volume to the earlier Aviation book on a similar theme aims to fulfil a gap in our maritime heritage. It is dedicated to 'all those whose only memorial is the sea'. This surveys more than 1,400 maritime memorials in England, Scotland, the Isle of Man, Wales and Northern Ireland. It has entries commemorating shipping disasters, lifeboat losses, and the dead of two World Wars. There are others celebrating the builders of great vessels, lighthouse engineers, explorers and merchants. This is an invaluable guide to those wishing to visit the memorial sites. It is easy to use, indexed by location, important persons, and ships and each entry includes an Ordnance Survey map reference, details of the memorial, and any background information available. It is very well illustrated making it a good reference as well as something to browse through.

From a naval point of view it seems very up to date with 10 Falklands Memorials at Guisely, Hamworthy, St Pauls, Marchwood, Portland, two at Portsmouth, Stubbington, Tweedmouth and Yeovilton. Other examples are the Algerine Association's Memorial at Port Edgar erected in 1988 and the stone cairn to the memory of the 39 men of the 12th Submarine Flotilla, who died in 'X-craft', at Kylesku in Sutherland where they trained.

The author explains in his introduction the huge number of people who have helped in the production of this book with written and photographic material. He explains that the book just scratches the surface of this subject as space would not permit the huge number of

memorials there must be. It also contributes to the index of pre-1914 maritime memorials maintained at the National Maritime Museum and the National Inventory of War Memorials maintained by the Imperial War Museum.

In any selection like this there may be glaring omissions and surprising inclusions. It is difficult to understand why under West Meon the grave of the father of the Dartmouth traitor, Guy Burgess, is listed when the monument to the most decorated Royal Marine Officer, Brigadier F. W. Lumsden, CB, VC, DSO*** at Eastney is omitted. Even more surprising is the omission of the Royal Marine Commando 'Yomping' Memorial at Eastney. There is of course a difficulty where individuals are commemorated in more than one place, like Commander J. 'Tubby' Linton, VC, DSO, DSC who was born and is mentioned under Newport, Monmouth but it is not recognised that he appears on the war memorial plaque inside the church at Meysey Hampton in Gloucestershire, where his family lived. The grave of Commander F. Jolly of HMS *Mohawk* at Boughton Monchelsea in Kent, who was awarded the Empire Gallantry Medal (George Cross) in the first London Gazette of 1939, is not noted.

The author asks for more information on old and new memorials and suggests we should have more new maritime 'Blue Plaques'. Perhaps it is time to commemorate the many great acts of Naval Gallantry and the award of George Crosses for RMS work in the UK. These for a start might include the awards for RMS work at Barking Creek, Hornchurch, Hoxton, Liverpool, Orpington and particularly at Charing Cross Station. As the author states this work requires a lot of time and effort which might be worthwhile.

J. H. BEATTIE

BARROW'S BOYS

by FERGUS FLEMING

(Granta – £20)

ISBN Number 1 8620 7173 X

What do you do with too many naval officers once a major war with the world's only other superpower is over? The answer to this quandary after 1815 was to send them out to venture into the unknown and to secure for England those parts of the globe which had not yet felt the full blessings of contact with the sceptred isle. The eponymous John Barrow, the Second Secretary to the Admiralty, wrote, 'To what purpose could a portion of our naval force be, at any time, but more especially in a time of peace, more honourably or more usefully employed than in completing those details of geographical and hydrographical science?' We are actually in the primary phase of the growth of the imperial ideal and the Scramble for Africa.

Under Barrow's aegis, with his links to scientific academia (he was President of the Royal Geographical Society) and the bureaucratic power to make things happen, exploration was elevated to the status of a national craze and the explorers to the early Victorian equivalent of superstars and media heroes. No matter that there did not seem much point to it – 'Sometimes he hit the spot; more often he missed it'. Constant pressure from the Treasury and cooler heads scarcely inhibited his enthusiasm and energy, which to a great extent the public, tired of the straitjacket of the Age of Reason, encouraged and applauded.

Fergus Fleming's absorbing and attractive book resurrects the host of long neglected and all but forgotten heroes whose exploits inspired the Victorian era and whose names echoed faintly through to Arthur Mee's Children's Books and the Look and Learn generation of the late 1950s and 1960s. Overwhelmingly, it is a sort of early 19th century saga of those with the 'right stuff', boldly going where no man had gone before. The action, reflecting public attention and romantic notions, centres on the search for the route of the Niger in West Africa and the elusive North-West passage, although the early Antarctic ventures, typically pioneered by Ross, are fully described too. It neatly and fully bridges the gap in our perceptions between the age of Cook and Clive and the more tangible personalities and achievements of Livingstone, Shackleton and Scott.

The endless fascination of this book is the diversity of personalities who embarked on these expeditions and their survival and success in the face of formidable obstacles,

appalling hardship and the far greater forces of nature. Most striking is the realisation that the vast majority of the expeditions into the ice in this period were carried out under sail and those into Africa without specialist equipment, clothing or prophylaxis. Hardly less surprising was the survival rate, especially when one considers the negligible chance of rescue, the extreme conditions and, in Africa, the prevalence, and near certainty, of serious disease. Here are examples of human endurance and resourcefulness stretched to (and beyond) the limit, in conditions exacerbated by decisions clearly made under pressure, sometimes by some distinctly dubious personalities, in the face of the unknown. These were tough men, tougher than we are today, both physically and mentally, who did not have the benefit of modern cartography, global positioning systems and kit provided by Berghaus and Karrimoor. Even by today's standards, there are some remarkable examples of excellent organisation, innovation and leadership techniques, such as Parry's overwintering in the ice of Melville Island in 1819-20. However, on the darker side, a more familiar, modern note is struck with the culture of backstabbing, self-advertisement and cut-throat competition. It shows how quickly a band of brothers mentality can evaporate in peacetime, when fame, advancement, influence and geographic prize money are to be won.

I thought reading the advertising spiel that it might be a Droggies' benefit, but it is a terrific story, full of unexpected, fascinating insights, experiences and anecdotes. Each chapter is a self-contained episode and the book makes a great bedtime or commuting read. It is no mean feat to have reconstructed a coherent, absorbing account from the complex, discordant jumble of self-justifying, exculpatory sources, clashing egos and the mass of routine scientific data.

I have always been amazed at Shackleton's escape from the ice of Antarctica in 1915-16, even traversing the still formidable Fortuna Glacier in South Georgia (not achieved in 1982). This book shows that that feat was by no means unique; every chapter evinces a degree of jaw-dropping awe and the inevitable question – how on earth did so many of them get away with it?

CHRIS PARRY

HISTORY OF WARSHIPS – FROM ANCIENT TIMES TO THE TWENTY-FIRST CENTURY

by JAMES L. GEORGE
(Constable – £25.00)

This volume sets out to bridge what the author describes as the gap between 'coffee-table' pictorial books and 'operational histories on seapower, which sometimes barely mention the warships themselves'. It is 'intended for both the interested general reader and the naval expert'. An ambitious work, therefore, and therein lies the origin of its substantial shortcomings. In seeking to address all audiences, I fear it will satisfy none. In addition to this structural and stylistic weakness, there are substantial errors of fact, judgment and content: 'Words alone cannot adequately describe the multitude of ship types', though this is just what George attempts to do in a book with few illustrations or drawings. The text often degenerates into tedious lists of dates, names and tonnages without really putting any of them in context, and providing little idea of what the things actually looked like. The over-simplistic nature of many of his observations also bears criticism: 'With all due respect to soldiers and airmen, a tank is a tank and a plane is a plane.' All this in the Preface, which should deter the reader from going any further. However, as a reviewer, I felt I should press on.

George divides his survey into the four main eras of warships – The Age of Galleys; the Age of Sail; the Age of Steam, Ironclads, and Steel; and the Modern Age. Barely a quarter of the book covers the entire period up to the beginning of this century, the remainder being chapters on the main types of warships in the twentieth century. Much of the constant stream of somewhat unexplained and unrelated facts is accurate enough, though readily accessible elsewhere such as Conway's excellent series *All the World's Fighting Ships*. What little analysis there is is usually simplistic and often flawed. For example, the demise of CVA-01 is ascribed to

'the RAF's erroneous argument for strategic deterrence. . .', which is not what the argument was about at all. Sometimes the author contradicts himself: both *Warrior* and *Dreadnought* were, apparently, the first modern warship. Jutland was 'the only classic battleship engagement in history', but then so was Tsushima, he tells us elsewhere.

One could catalogue errors of fact or judgment from every chapter. Some close to the hearts of *NR* members should suffice: The 'Invincibles' are repeatedly referred to as 'V/STOL' carriers, which is not the same as STOVL, which is what they really are. They are not, we learn, 'front-line combatant ships', and they only carry fourteen aircraft.

I wish I could say something more positive about this work, but I think it will only irritate the informed reader and confuse the layman.

J. R. STOCKER
LIEUT. CDR, RNR

REMINISCENCES OF A NAVAL OFFICER

by CAPTAIN A. CRAWFORD RN
(Chatham Publishing – £12.95)

A SAILOR OF KING GEORGE

by CAPTAIN F. HOFFMAN RN
(Chatham Publishing – £9.95)

These paperbacks are reprinted autobiographies by two junior officers who served in the wars with France between 1793 and 1814. Crawford spent three weeks at home in eleven years and Hoffman was a French prisoner. Both gave it their best but had modest reward; Crawford was one of two promotions to Commander in 1814 in Admiral Hallowell's haul-down list; in the Navy List of 1829 he is a Commander still. Hoffman was acquitted by court martial for losing his ship but the trial itself was enough to ensure he went no further. He gives a gloomy summary of his naval career:-

> 'The days of my youth have floated by like a dream, and after forty-five years in the Navy my remuneration is a hundred and eighty pounds a year without any prospect of its being increased. If the generality of parents would take my advice they would never send one of their boys into the service without sufficient interest and some fortune.'

These authors do not tell stories with happy endings. They tell it as it was for junior officers in the Navy's greatest days. They probably thought that posterity might be stirred by the detail and they were right.

Crawford was plucked from ten siblings by his father at the age of thirteen and put on a horse to ride from his County Waterford vicarage to a frigate at Cork. He found the life of a midshipman one of 'fearful slavery' but managed to pass for lieutenant after five years and enjoy his first leave. Most of those years were served in the crack frigate *Immortalité* under Sir Edward Owen, a frigate captain in the Dundonald class. *Immortalité* scoured the French Channel coast between Cherbourg and Boulogne, challenging some 2,367 craft waiting to bring 160,000 foot and 700 horse across the Channel as soon as the British fleet could be diverted to a safe distance. In 1804 Napoleon meant business.

Immortalité was constantly in action, her guns engaging the French forts and horse batteries, her boats cutting out imprudent enemies, while the casualties mounted. Two 'noble fellows' wave the stumps of their arms to a passing ship. Those were the days.

Crawford reminds us that the dangers of the sea killed more than the violence of the enemy. *Immortalité* , on passage to Cuxhaven to embark Lord Cathcart's army, finds herself led by two incompetent pilots into the bight of the Vogel, instead of to the south of it. They cannot sail out because of a heavy northerly gale. Their lives depend on the anchors.

Commodore Owen writes last letters to his wife and to the Admiralty and puts them in sealed bottles so that her fate would be known. The ship's company, except for showing a 'subdued tone' are resigned to disaster and obey orders with 'zeal and alacrity', although they know that if the man in the chains with his lead on the bottom reports that she is drifting they are doomed. Seamen in the sailing warships sometimes needed the craft of a concert violinist; courage and a trust in the Almighty were not enough.

Crawford missed Trafalgar and went to *Royal George*, a 100 gun three decker. In her he saw the 74, *Ajax* destroyed by fire, one of

Sir George Duckworth's squadron which forced a way through the Dardanelles and then came back without a victory, his ships knocked about on the way by 800lb stone missiles from the Turkish mortars in the Narrows.

> 'Never did a British naval officer of high rank succeed in making himself, his squadron, and his country so ridiculous as Sir John Thomas Duckworth.'
>
> (Laird Clowes, vol.5 p.229)

Crawford was involved in another failure, the siege of Tarragona. The general had to face the court martial that time. He describes Buenos Aires, Constantinople and Alexandria (he was there too) as 'three feeble expeditions'. After Trafalgar much was anti-climax.

Hoffman went to sea eight years before Crawford. He persuaded his mother to speak to a friend of hers who came to be entertained in her London drawing room in his post captain's uniform. He was mad to enter the Royal Navy and found himself in the gunroom of the *Blonde*, frigate, in the West Indies. With short breaks he stayed there for the next eleven years. The officers drank to bloody wars and a sickly season; he had plenty of both.

After the Martinique campaign he took part in repeated small ship and boat actions against the French and Spanish. He was wounded, taken prisoner and given command of prizes. He learnt his job. It was a make or break system.

Hoffman survived two bouts of yellow fever; the first nearly killed him. Probably he expected to die. In his ship only two out of sixteen midshipmen, three out of eight lieutenants and two hundred out of five hundred and sixty sailors lived through the epidemic. Early death was nothing special in his day and the young gentlemen helped themselves while the going was good. He describes the endless meals, dancing, riding and general hell raising that kept the black dog of depression away. He has a sharp eye. This is a dance at San Domingo,

> 'dignity ball given by upper class copper coloured washer women, a quintessence of perfection in affectation'.

Some of the detail, such as the screams of two hundred Hessian troops drowning in a foundering transport, the wounds received by the Forlorn Hope at the storming of Fort Royale who fell backwards off the ladders onto the bayonets of their comrades climbing behind them, scurvy patients 'like bloated monsters' taken ashore and buried up to their necks with attendant boys to brush off the flies while they waited for the cure to work, takes you there.

Sometimes he gets carried away. He describes the fate of the brutal Captain Pigot and the officers of the frigate *Hermione*, hacked to death or thrown overboard in the Navy's worst mutiny, and accurately describes how Captain Hamilton of the frigate *Surprise* led a cutting out party and brought her back. The mutineers did not jump overboard or get hanged at Port Royal as he says because they were no longer there. She was Spanish manned when Hamilton took her. (Laird Clowes, vol. iv p.527; James, ii 361).

At Trafalgar he was in the thick of it in *Tonnant* who lost all three topmasts, 26 killed and 58 wounded. Sixteen amputations were carried out after the battle but only two patients survived. The motion of the ship in the gale caused the stumps to break out and the men died before the haemorrhages could be stopped. Back at Portsmouth *Tonnant* lost only two out of six hundred men by desertion.

Captain Crawford's account is a serious, careful record; Captain Hoffman leaves out names and dates in a welter of anecdotes and recollections told at speed. He saw more action and is blessed with a sense of humour. Both books take you deep into life in the 74s, frigates, brigs and boats of the navy of Nelson's day. Both are hard to put down.

R. A. CLARKSON
COMMANDER RN

NELSON
The Public & Private Lives of Horatio Viscount Nelson

by G. LATHOM BROWNE

Reprinted in 1999 by Trident Press International from the 1891 T. Fisher Unwin edition. Available in the UK from County Bookshops @ £7.99

This volume is a worthy and fascinating

(re)addition to the long list of biographies (over 300 I believe) that have attempted to describe Nelson's life and the effect he had on the Royal Navy, the United Kingdom and indeed the World. G. Lathom Browne's book was re-discovered in an antiquarian bookshop in Boston, USA, and much of the book's interest comes from its contemporary perspective.

In 1891, the Royal Navy ruled the World – or at least it and the 'Great British Public' believed that it did – and Nelson, as the founding father of the RN's global supremacy, was above criticism. The Naval Defence Act had been passed in 1889, laying down the 'Two Power Standard' – the principle that the Royal Navy must be at least as powerful as the next two largest navies combined. There was public agitation for more battleships in the building programme than the Admiralty had asked for. Later in the decade Britain, under General Kitchener, and France, under General Marchand, came nearly come to blows over control of the Sudan in the Fashoda Incident in 1898. The French Fleet in Toulon was mobilised, but the British Mediterranean Fleet was on station off Alexandria well before the French had sailed and the French conceded.

The author makes much of how Nelson could not have been the father of Emma Hamilton's daughter Horatia and how he was innocent of the charges that he unjustly hanged Count Caracciolo at Naples in 1799. On the former, modern biographers have no doubt as to Horatia's parentage and Nelson's treatment of Caracciolo is, at the very least, open to question and I personally believe cast a significant shadow upon his integrity. The disappearance of Lady Nelson from the scene is also glossed over.

Those criticisms apart, this is a well constructed biography and much of its strength lies in the fact that about a half of the text is composed of passages lifted from letters and reports written at the time of the events they describe. Whilst this may reduce the historical accuracy of the narrative in the eyes of the purist, it certainly enhances the immediacy of the story from the reader's perspective. The book is weak on maps, but scores well by having the date at the top of every page and by having a summary of all the noteworthy events in Nelson's life at the beginning.

I enjoyed this biography of Nelson. I could not recommend it to someone who does not know the story of Nelson, at least in outline, already because of its partiality, but if you are already aware of the main facts, then read this – it will challenge some of your assumptions and give you a different insight into this fascinating man.

ANDREW WELCH
COMMANDER, RN

HISTORY OF THE RUSSIAN NAVY

by VLADIMIR Y. GRIBOVSKY and
ANATOLY RAZDOLGIN
with English translation
by VIKTO S. PROTOPOPOV
ISBN 5 7580 0067 1
(Published in 1998. Russian and English. 299 pages with 90 water colour paintings and many black and white illustrations. Bound in solid copper).

This fascinating Russian book deals with events under the ensign St Andrew – a pale blue St Andrews cross on a white field – flown by Russian Navy ships from the early 1700s until 1924 when, officially, the white forces ceased to exist and Soviet Russia was recognised internationally. The Russian Navy had become the Soviet Navy and hoisted a hammer and sickle ensign from January 1924.

To my surprise I read in the Epilogue that 'Following decades of Soviet rule the sky blue cross of St Andrew once again flies over ships of the Russian Navy in 1988, serving to link past and present'. A charming water colour shows the scene on a Russian quarter deck with the St Andrews ensign hoisted and the Soviet Russian naval ensign lowered as all officers salute and bugle is sounding.

The first fifty pages cover early days of fighting Sweden in the Baltic and Turks in the Black Sea and even an occasion in 1716 when Czar Peter the Great commanded an Allied Russian, Danish, British and Dutch fleet off the Danish coast which then attacked Bornholm and even considered attacking Karlskrona.

One painting shows three masted lateen rigged galleys with 20 oars a side sailing in the

skerries about 1720 when one might have thought such a rig was limited to the Mediterranean.

Peter the Great's successors did not appreciate the value of a navy in enforcing political power and international influence and Russian importance and power in the world suffered for over a hundred years.

We read how Catherine II did issue her Declaration of Armed Neutrality in 1780 with some support from Denmark and Holland and Baltic countries but had not the power to enforce it.

In 1801 we read of the Russian Squadron in action in the Adriatic and in the assault on Malta where there was some disagreement with Vice Admiral Nelson as he was junior to the Russian Admiral Ushakov.

Most of us have heard how the combined Russian French and British fleet trounced the Egyptian fleet at Navarino but it surely will surprise us to read that Russian Marines fought with us at Waterloo and in 1853 the Russian Navy had more men (but fewer ships) than Britain.

The Russo–Japanese war is fully described and it is interesting to read that the Russian building programmes from 1908-1914 called for eight battleships, four battle cruisers, 10 cruisers, 53 destroyers and 30 submarines.

Had the morale not been so low with not infrequent mutinies (apart from *Potemkin*) the Russian Navy might have been a much more important factor in the 1914-1918 war. Sadly the book refrains from recounting anything of the fleet under Soviet control from 1924-1988.

MORIN SCOTT

BOOKS RECEIVED

The following books have been received and are gratefully acknowledged. Space and subject do not allow a full review; it is hoped that the following brief notices, which are made without any value judgment or recommendation, will be helpful in bringing the books to the attention of members with specialised interests.

The Blooding of the Guns, by Alexander Fullerton (Warner Books, ISBN 0 7515 1620 1, £5.99 paperback): reprint of 1976 novel about destroyers at the Battle of Jutland.

Last Lift from Crete, by Alexander Fullerton (Little, Brown, ISBN 0 316 64075 1, £16.99): destroyer and cruiser novel first published in 1980.

Flag 4, by Dudley Pope (Chatham, ISBN 1 86176 067 1, £12.95 paperback): Historical account of the Battle of Coastal Forces in the Mediterranean 1939-45, first published in 1954.

Towers of Strength, by W. H. Clements (Leo Cooper, ISBN 0 85052 679 5, £19.95): Martello towers, not only in Great Britain but in Europe, Ireland, Canada, America, Australia. By a member of the Fortress Study Group. Many illustrations.

Battleships of the Scharnhorst Class, by Gerhard Koop and Klaus-Peter Schmolke (Greenhill, ISBN 1 85367 365 X, £25): Profusely illustrated with photographs and diagrams, a full life-and-death history.

German Navy Handbook 1939-1945, by Jak P. Mallman Showell (Sutton, 1999, ISBN 0 7509 1556 0, £25): 274 pages of detail with illustrations, somewhat heavily weighted to surface units but including submarines, command organisation, shore bases, uniforms, insignia.

Note: Fernhurst Books announce the publication of their latest, 8 page brochure of around 100 watersports titles. Free copy from Fernhurst Books, Duke's Path, High Street, Arundel, W. Sussex BN18 9AJ, tel. 01903 882277, e-mail: sales@fernhurstbooks.co.uk.