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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> 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

Independent: Professional

It is not for nothing that those two words appear on every front cover. They are the key to *The Naval Review*'s purpose and existence. I am very glad therefore to say that in the Committee's view, expressed at a recent meeting, they were amply fulfilled in the last two issues and no doubt will be equally honoured in this and subsequent numbers.

Much impetus has come of course from the Strategic Defence Review; if that did not generate professional discussion we really should have cause to worry. One can already see several strands emerging.

The first is about the characteristics of the new aircraft carriers. The October issue carried MEO's conception; this one brings a different view, given at length in Commander James's winning essay for the FAAOA 1998 prize, and in several letters in the correspondence column. There is also a perceptive shorter article about policy before CV(F) comes into service. Of course the whole topic will run and run, as it ought; I suspect it will be as extensive as the debate on 'The Size of the Fighting Ship' in the early 1930s. It ought to be something the *NR* does supremely well.

The next strand that can be seen is jointery, dreadful word, essential concept. It is again a matter for informed professional discussion. I hope members from the other services will contribute. It was good to see a letter from Group Captain Moss for this issue – giving us a rocket for not being joint. Keep it up.

The third strand is management, in the broadest sense of the term. It includes budgeting and accounting – how different that is from the 1930s – and the whole recruiting/retention/motivation complex that is so essential to all levels of the service. There is only one article as such on that topic this time but I know a couple are on the stocks.

Finally there is in this issue an article on comparative preparation for, and performance in, sea training. No topic could be more professional than that. It will not only be your editor that sees the findings as disturbing. They do not, be it said, stem from a single factor; shortcomings in performance seldom do. The point is reinforced in Sub-Lieutenant White's essay on Battle Cruisers; I think he may be a bit confused on where 'ships' and 'system' converge, but that's just it . . . isn't it?

As a coda, I did in the January 1998 issue say that it was our policy to 'admit the questioning voice' on the assumption that 'the voice is loyal and the questions it asks are meant to be constructive'. I hold to that of course and have to say that there is one item of correspondence in this issue which may be thought not to meet that criterion. I allowed it to run partly because it was so close to the limit of tolerance. It will be interesting to see the reaction, if any.

Fighting the next war at sea

The Scottish Centre for War Studies, University of Glasgow, is holding a conference on 24 and 25 March 1999, designed to relate the study of seapower to the technological base which underpins it. Speakers will include Michael Epkenhans, David Evans, Norman Friedman, Eric Grove, Paul Halpern, Nicholas Lambert, Even Mawdsley, Phillips O'Brien, Mark Peattie, Werner Rahn, Jon Sumida and Geoffrey Till. The countries to be considered are Britain, France, Germany, Japan, the USA and Russia, and the chronological span will run from 1880 to 2020. The Secretary of State for Defence, the Rt Hon George Robertson, will speak at the Conference Dinner. For further details and a booking form, please write to the Scottish Centre for War Studies, University of Glasgow, Glasgow G12 8QQ (tel. 0141 330 3585; fax 0141 330 5000), or e-mail the acting director, Dr. Neville Wylie, on n.wylie@modhist.arts.gla.ac.uk.

Sea Power at the Millennium

An international conference under the patronage of the First Sea Lord, Admiral Sir Michael Boyce, will be held from Wednesday 12 to Friday 14 January 2000, in Portsmouth. The programme includes a civic reception and a dinner in HMS *Warrior* (1860). The Conference will examine in parallel sessions all aspects of sea power – strategic, commercial, industrial and social – at the turn

of the millennium. For further details, or to make proposals for papers and/or conference sessions, please contact the Conference Secretary, Commander Alastair Wilson, Royal Navy, The Royal Naval Museum, HM Naval Base (PP66), Portsmouth, Hants PO1 3NH, tel/fax 01243 775285.

Memorial to Sir Home Popham

Hugh Popham's family, in conjunction with the 1805 Club, have refurbished the memorial to Admiral Sir Home Popham in the churchyard of St Michael and All Angels at Sunninghill (Ascot). The obelisk will be rededicated after morning service, which begins at 1030, on Sunday 18 April 1999, in the presence of Admiral Sir Peter Abbott, Vice Chief of the Defence Staff. Further details from Peter Warwick, 101 Pepys Road, London SW20 8NW; telephone number 0181 947 9061.

ISBN

Could reviewers please in future include the ISBN in the heading of reviews? I am told it helps booksellers when ordering.

AGM 1999

It is proposed to hold the AGM at BRNC, Dartmouth (by permission of the Commodore), on a date yet to be agreed in the last half of May. Details will be given in the April issue.

RICHARD HILL

Subscriptions – 1999

Those members whose subscriptions are not paid automatically by their banks and who have not yet paid their subscriptions for this year are asked to do so as soon as possible: £15 (or £7.50 for Sub-Lieutenants and below).

Carrier 2000: A Consideration of Naval Aviation in the Millennium – I

Introduction

IN 1994 the UK Ministry of Defence (MoD) embarked upon a series of concept studies to examine the options for replacing the three 'Invincible' class aircraft carriers in current service. The conclusion of this work was to lead to the generation of a Staff Target for presentation to and approval by Ministers in late 1997. The study work has now been completed, but the arrival of a new Labour Government in May 1997 prompted the initiation of a Strategic Defence Review (SDR) which included a fundamental assessment of whether or not the Royal Navy should operate aircraft carriers in the future and if so, what should be their principal capabilities. Naturally, this delayed Ministerial approval of the Staff Target for The Future Aircraft Carrier (CVF) until the White Paper summarising the future of UK Defence was presented to Parliament in the summer of 1998.

Aim

The aim of this paper is to establish the need for CVF within the future UK force structure and to discuss the principal capabilities which should be included in such a vessel.

The genesis of the 'Invincible' class

The analogies between CVF and the Royal Navy's last attempt to persuade a Labour Government on the need for a new class of aircraft carrier are inevitable. In 1966 the building of CVA 01, Britain's first nuclear powered aircraft carrier, was cancelled as a result of the defence review initiated by a new Labour government entering office after a lengthy period of Conservative leadership. There are other parallels; the Royal Air Force (RAF) are seeking a Future Offensive Air System (the major component of which is likely to be a future manned aircraft) in similar time frame to CVF, in 1966 the Air Force were seeking a new offensive aircraft, the TSR2. Similarly, although the UK economy is arguably stronger now than it was in the mid 1960s, both in 1966 and today each Government perceives a need to save money on Defence expenditure in preference for 'higher priority' claims to the public purse. However, in 1966, the acrimonious wrangling between the Air Force Department and the Admiralty succeeded only in providing sufficient evidence for the Treasury to make a case for cancelling both projects, albeit the TSR2 survived rather longer than CVA 01. In contrast, there is now a common understanding of the complementary nature of sea and land-based air power across the MoD, and there is common agreement on the need for a balanced military capability to emerge in the SDR conclusions.

There is much folklore surrounding the cancelling of CVA 01 with the Air Force Department being accused of conveniently displacing Australia by some 500 miles to support their 'Island Base' alternative to carriers and poor Staff Work in the Admiralty being two of the more commonly told accounts. In fact, whilst there might be some truth in all of the stories, it seems the principal cause of failure was that the case for the carriers was based solely on the need to operate East of Suez. When the Government determined that the UK could no longer afford or justify the role of 'global policeman' and aligned our defence priorities squarely with NATO in Europe, the case for CVA 01 was lost. Post 1966, and apart from the Polaris force, the Royal Navy's principal role was to provide Anti-Submarine Warfare (ASW) protection to USN Carrier Battle Groups in the Greenland, Iceland, UK Gaps as part of NATO's Forward Maritime Strategy.

The Forward Maritime Strategy aimed to keep the large Soviet nuclear attack submarine fleets contained in the sea areas north of the Greenland, Iceland, UK gaps to allow American reinforcement and re-supply shipping unhindered passage across the Atlantic and thus ensure any land war in Europe could be credibly fought without premature recourse to nuclear weapons. To prosecute successfully so many Soviet nuclear submarines, the Royal Navy perceived the need to deploy large numbers of ASW Sea

King helicopters in the North Atlantic. The 'Invincible' class was conceived as the platform for these aircraft and also as the afloat headquarters of the Commander ASW Strike Force. The initial Staff Requirement called for a ship capable of operating nine Sea King helicopters in the North Norwegian Sea and with Command, Control, Communications and Intelligence (C^3I) facilities to support the NATO command task. The ship was termed a 'through deck cruiser', partly to avoid using 'aircraft carrier' so soon after the demise of CVA 01 but, more accurately, because these ships were to fulfil a traditional cruiser role (extensive command facilities, the Sea Dart Weapon system etc.) and were built to cruiser construction standards. Initially the design did not feature a 'through deck' but the superstructure was eventually off-set to starboard. This decision coupled with the successful development of the Harrier Short Take Off, Vertical Landing (STOVL) aircraft, allowed five Sea Harriers to be added to the *Invincible*'s air group. The Sea Harriers were required to eliminate the threat from Soviet reconnaissance aircraft which could direct air attack against NATO maritime forces. However, NATO land-based fighters were perceived as the main protection from the classic Soviet Regimental Badger raid, leaving the Fleet Air Arm (FAA) with only a tenuous role in air defence and a very limited fixed wing capability.

Of course in 1982 the principal task for the Royal Navy was temporarily moved 8,000 nautical miles to the south and *Invincible* demonstrated the remarkable versatility of these ships, embarking and operating over 20 aircraft during the Falklands conflict. The Sea Harrier also came of age. Apart from a very few RAF Harrier GR3s, the Sea Harriers were the only fixed wing combat aircraft in theatre and were tasked on air defence, reconnaissance and ground attack, achieving considerable success in all roles. Without the Sea Harrier and ships capable of operating them, it is doubtful whether the UK could have restored British Sovereignty in the Falklands. The success of the 'Invincible' class STOVL carriers led to the acceptance of this type of ship as a credible and affordable means of deploying air power. At a fraction of the cost of a nuclear powered ship with Conventional Take Off & Landing (CTOL) aircraft, the STOVL carriers proved an attractive option and are now in Spanish, Italian, Indian and Thai service.

Following the Falklands conflict, the *Invincible* was retained in the Royal Navy (there had been a plan to sell her and run only two ships in the class) and the air group evolved to a standard mix of 6-8 Sea Harriers, 7-9 Sea King ASW helicopters and 3-4 Sea King Airborne Early Warning (AEW) helicopters. This was a far more potent air group than that perceived during the initial design, but one still principally geared to maritime tasks such as ASW, maritime air defence and attack of opposing naval forces.

Strategic change

Since the demise of the Soviet Union, the end of the Cold War and almost a decade of NATO readjustment, it is now widely acknowledged that the threat of general war and, in particular, direct threat to the UK has receded and, perhaps arguably, continues to recede. Certainly it is not credible to consider general war without considerable warning time, and it is therefore no longer necessary to keep a large military force at short notice to respond to such threat. However, identification of what the appropriate indicators and warnings may be, and whether there will be the political will to respond to early indications of a future hostile act, remains an issue, but one beyond the scope of this paper.

A regional crisis within NATO is, therefore, likely to be the largest scale military action that UK would have to respond to with limited warning. NATO regional crisis thus becomes a military force driver, that is a determinant of the range and scale of forces the UK will need to sustain at relatively high states of readiness. The likelihood of a NATO regional crisis is uncertain, but, if the UK is to meet its obligations, it must sustain forces capable of making an effective and rapid military contribution in support of any NATO ally, under article 5 of the Washington Treaty.

Of course NATO is essentially a narrow perspective of our wider security interests

since UK is heavily reliant on a free market for world trade, has many nationals living abroad and *still* has dependent territories and security agreements such as the Five Power Defence Agreement it must honour. It is unquestionably in UK's direct interest to promote peace and stability throughout the world and, as even the most casual review of recent world events will highlight, there are many and varied potential threats to peace and stability.

Arms proliferation is a particular concern; not only the availability of ex-Soviet military technology to third world states, but also the increasing sale of sophisticated Western technology as European and American defence manufacturers seek to offset the shrinking home market by increasing exports. Thus, in any future conflict, UK forces are likely to face weapons with similar technology to their own and will not be able to rely on a 'quality of weapons' advantage. In addition, and despite considerable international efforts to prevent their spread, weapons of mass destruction (encompassing nuclear, biological and chemical warheads) are becoming an increasing threat as witnessed by the recent underground nuclear tests in India and the response from Pakistan. There may be some comfort in the thought that less well-developed nations do not have the ability to deliver these weapons in a direct attack on the UK and would be challenged to target a mobile maritime force, but in the hands of an unstable or fanatically inspired regime they pose a considerable regional threat. This threat is compounded if the opponent does not hold the same rational value set as that widely recognised by most NATO partners. In such circumstances, what appears an inconceivable tragedy to the West may be entirely acceptable to a regime which places a different value on human life, undermining the effectiveness of international attempts to deter conflict or uphold human rights. Instability is also insidious as the events in Bosnia so graphically demonstrated. Long suppressed but deeply held beliefs, be they religious, ethnic or inspired by other sources, have the potential to create conflict in areas of direct concern to the UK.

A further consideration and an inevitable consequence of the world market place, is the ever expanding tapestry of military and trade alliances between nations and groups of nations. The relatively simple 'us and them', or bi-polar strategic map of the Cold-War era has been immeasurably complicated by such factors and it is no longer possible to predict with confidence who will be coalition partners for some future crisis.

Militarily this raises a significant issue, the availability of Host Nation Support (HNS). The simple consideration as to whether HNS will be guaranteed is becoming difficult to predict, but a caveat placed on the use of host nation facilities, as imposed on occasion during the height of the Bosnia crisis and during recent events in the Near East, would seriously affect the ability to deploy a national or allied force. Even in circumstances where HNS is ultimately granted, the diplomatic decision process could take so long that military action is complicated, undermined or negated. Finally, the maturity of host nation facilities may be insufficient to support a modern aircraft with advanced support requirements such as the maintenance of low observability (stealth) features. Clearly some of the under developed nations would be challenged in this regard, but the potential new partners in NATO might also struggle to support the high technology equipment used by some of the more established NATO members.

These factors are not exhaustive but they serve to illustrate the unpredictable nature of conflict in the post Cold-War era. In the past it was relatively simple to justify the need for a military equipment programme against a known threat for a predictable war in a known geographic location; now new military equipment must be procured with the capability to prevent, coerce or fight an unknown enemy in an unknown location with undetermined allies.

The security situation faced by the UK is thus markedly different from that prevailing in 1966 and until the destruction of the Iron Curtain. Weapons proliferation, the drugs trade, terrorism, ethnic and population pressures and the break up of some existing states all present new or greater challenges.

Increased globalisation, in which all states are becoming increasingly interdependent, requires the UK to be able to act in coalition, in response to circumstances which undermine the strength and stability of the international structures upon which we and our allies depend. Furthermore, the contribution made by military forces in defusing and managing crises, through what may be described as 'defence diplomacy', have already been demonstrated in a wide range of day-to-day contacts and peace support operations.

The Government has acknowledged that the UK has wide international interests beyond Europe. These are most likely to be affected by events in the Gulf, the Near East and Africa and we must be ready to respond, in coalition with others, to support stability in these regions which are vital to our economic prosperity. UK interests also extend beyond these regions but the risks to them are of lesser magnitude. Whilst interests in areas such as the Far East are unlikely to drive our force structures, it is clear that forces capable of rapid deployment and sustained operations will be of great value in supporting the role of the United Kingdom's armed forces 'as a force for good in the world'.

The conduct of future military operations

In stark contrast to the well developed and frequently practised tactics of the Cold War, it is exceptionally difficult to plan for a future war of attrition against an unknown enemy in an unknown location. The operation is also likely to be fought alongside allies of an ad hoc coalition who may not even be NATO partners and who may have a different view on the need for military intervention than that held by the UK. Therefore, the SDR is likely to renew the emphasis in Military Tasks which assist crisis prevention, coercion and defence diplomacy. If conflict becomes unavoidable, distance from the UK, media pressures and public opinion are likely to militate against a campaign that relies on the attrition of the enemy, particularly as this will increase the risk of casualties among allied forces. An emphasis on the doctrine of manoeuvre warfare is thus entirely coherent with the unpredictable nature of future conflict.

Operational manoeuvre is based on a philosophy of striking at the enemy's key points rather than tackling his military might head on. The aims are to destroy his cohesion (for example by destroying his command and control infrastructure), to unbalance the enemy (in which surprise or unpredictability are key factors) and to take decisive action (to select and achieve the, possibly limited, objective) as quickly and dynamically as possible thus denying the enemy reaction time. Collectively the aim is to prevent co-ordinated, effective military action in preference to seeking the opponent's defeat through the systematic attrition of his forces. Ideally the enemy is persuaded of the futility of continued conflict and surrenders.

The utility of aircraft carriers in an unpredictable world

Against this evolving strategic setting and future concept of military operations the utility of aircraft carriers can be assessed. Clearly it is no longer credible to base this assessment on predictable scenarios with accurately quantifiable threat orders of battle ranged in opposition to allied forces. Therefore the assessment of aircraft carrier utility has been based on accepted UK doctrine. The increased emphasis on littoral[1] operations suggests that a CVF will inevitably be engaged in joint and combined operations for the majority of missions. In the absence of formally issued joint doctrine for UK forces the analysis examines, in turn, a carrier's utility to maritime, military and air power doctrine. In this context maritime doctrine has three facets; power projection, sea control, and constabulary or benign tasks. The CVF contribution to military doctrine includes maritime manoeuvre and amphibious warfare, while the broader contribution of aircraft carriers to air power doctrine is more generic.

Power Projection is the use or threatened use of military force (maritime, military or air)

[1]The littoral includes the area overland over which maritime forces are capable of projecting power and the sea areas in which they operate whilst engaged on such missions. In very broad terms it is the sea area within 200 nautical miles of the coast and up to 500 nautical miles inland from the coast.

at a distance from UK to achieve a political aim. Specifically the CVF could conduct:

– Combat operations against the land, which includes offensive air support operations, air interdiction and electronic and information warfare.

– Support air operations backed up by comprehensive medical and air maintenance facilities. Examples are the evacuation of civilians in a Services protected operation, the conduct of combat search and rescue missions and casualty evacuation.

– Operations in support of diplomacy, involving the visible presence or simply the possibility that the carrier may be somewhere over the horizon, poised to influence events. Carriers offer political flexibility through proportionality, unhindered by the need to gain support from a third party. Thus, the pre-positioning of an aircraft carrier is a national decision which, taken quickly, may be sufficient to prevent an impending crisis. Such preventative, precautionary and pre-emptive uses of naval force are traditional applications of naval diplomacy but are only effective if escalation is credible. A carrier's ability to rapidly increase and sustain the tempo of air operations is, in itself, an effective deterrent.

– Peace Support Operations, as exemplified by recent examples of operations in the Adriatic and Gulf of Oman, which highlight a carrier's ability to remain independent of third party co-operation, and capitalise on its ability to move rapidly, at very short notice, to provide the correct military response, including fire support.

Sea Control. This is properly defined as the control of a sea area for one's own, national purposes. A carrier has applicability across the following elements:

The interdiction of enemy forces (sea, air and submarine)

The protection of maritime trade

Surveillance

Establishing and maintaining maritime exclusion zones

Layered protection and

Precursor operations

Without a carrier, the achievement of these tasks would require commensurately greater numbers of other assets, such as land-based air defence aircraft, surface escorts and other helicopter operating platforms.

The final element of maritime doctrine is *Constabulary and Benign tasks.* By definition these do not involve military action and it could be argued that a CVF would be excessively capable for such tasks. However, an aircraft carrier would dramatically increase the probability of success in many of these operations and could be expected to maximise international recognition for UK participation in such missions.

In a joint context, military doctrine is the principal driver for a carrier's war fighting capability: *Maritime Manoeuvre* has become synonymous with the contribution of maritime forces to joint warfare in the littoral. Specifically, a CVF would contribute air support to the land forces, maximising the advantages of sea-based air power.

– The CVF could be taken under the direct operational control of the Land Force Commander who could determine the optimum position for the 'airfield' in relation to the land battle, determine the target priorities for the aircraft and exercise positive, dynamic control of the immediate air assets.

– The floating airfield can move in parallel with the land battle, minimising reaction time and guaranteeing appropriate fire support where and when required. This will apply to the carrier-based fixed wing and, if required, the associated Attack Helicopter force which might also be deployed from the CVF.

– Finally, the maritime task force can provide protection to the land force logistic tail – particularly as the vast majority of equipment and personnel will, inevitably, be transported by sea.

A further element of military doctrine is *amphibious warfare.* The UK has invested substantially in a modern amphibious warfare capability with the new amphibious helicopter support ship HMS *Ocean* nearing completion

and the new landing ships *Bulwark* and *Albion* now under construction. Of course carrier aviation has a vital role to play in amphibious warfare as it is the only guaranteed source of offensive air support for these lightly armoured, highly mobile forces.

A traditional view of amphibious forces is to use them for theatre entry, the so called 'knock the door down' capability deemed necessary to secure sea and air ports of entry for the larger follow-on forces. This is the predictable employment of amphibious capability, with an initial 'storm the beach' followed by consolidation ashore before 'breaking out' to other objectives, as exemplified during the Falklands conflict. A manoeuvrist view would be rather different, more akin to the concept of a raid where the forces move in quickly, achieve the objective and withdraw before the enemy has time to respond in a structured or ordered manner. Alternatively, the amphibious force could be used to poise on an enemy's seaward flank as a potential and unpredictable threat causing a disproportionate and debilitating diversion of forces to repel the potential attack. All of these conceptual uses of amphibious capability rely heavily on guaranteed air support which in many circumstances can only be provided by an aircraft carrier.

Air power doctrine is the application of air power to achieve a military purpose. Here, aircraft based in the CVF are able to contribute in exactly the same manner as landbased equivalents. The recent embarkation of RAF Harrier GR7s to supplement the Sea Harrier FA2 force in the 'Invincible' class carriers deployed in the recent Near East crisis exemplified the flexibility of a carrier air-base. Returning to the uncertainties of time, place, enemy and ally, a carrier ensures that at least part of the UK's offensive air power can be brought to bear in a timely manner without reliance on a third party. Similarly, by positioning the floating airfield close to the crisis area, the need for air-to-air refuelling can be minimised and combat aircraft are able to concentrate their effort in combat rather than lengthy and exhausting transits between the air base and theatre of operation. More importantly, close proximity to the battlefield enables the carrier to respond instantly to changes in operational tempo, providing offensive aircraft in direct support as the situation demands. By operating close air support aircraft from deck alert, concentrated firepower can be applied in a far more effective manner than the limited number of aircraft that could be sustained on airborne alert from a distant airfield. Sustained combat presence is the Achilles heel of air power, but the inherent sustainability of maritime forces, enhanced and extended by replenishment at sea from the Royal Fleet Auxiliary, would enable CVF based aircraft to overcome this limitation. However, the CVF would need to be more than simply a forward operating base for fuel and weapons if sophisticated aircraft are to be kept combat ready. Extensive maintenance and stores facilities will be essential elements of the total package.

The final element of air power is C³I support. A future carrier will need to be able to take advantage of the full C³I infrastructure developed for land-based aircraft but will be able to forward deploy the operational aircraft control centre without reliance on any other form of strategic lift. Furthermore the carrier's comprehensive communications suite will remain in constant contact with higher command, and there will be no requirement for the additional protection required by a temporary shorebased C³I facility.

The unpredictable nature of future crisis, the desire of the Government to use UK military capability as 'a force for good in the world' and the consequent adoption of joint, flexible military formations present a vastly different strategic environment from that of 1966. The broad utility of aircraft carriers would appear indispensable in the post Cold War era yet the financial pressures of a modern democracy require the procurement of CVF to be balanced against other conflicting demands on public money. Clearly the procurement of CVF is as much dependent on the ability to produce a potent military capability at an affordable price with demonstrable benefit to the UK industrial base as it is to the currently perceived future strategic environment.

(to be concluded)

D. R. JAMES
COMMANDER, RN

The Path Toward CV(F)

A new beginning

THE recent deployment of HMS *Invincible* and HMS *Illustrious* to the Arabian Gulf in support of Operation Bolton was a timely reminder of the flexibility and utility of Air Power from the sea. It has been described as the definitive post Cold War aircraft carrier operation – *'diplomacy backed up by firmness and force'*. Against a backdrop of the Strategic Defence Review (SDR), the timing was indeed fortunate. A succession of VIP visitors to the Gulf theatre, to Secretary of State level, saw for themselves the requirement to balance military capability against foreign policy objectives. The case for CV(F) could not have been more forcefully made for, despite the undoubted success of Bolton, the limitations in size and capability of the current CVS were only too apparent, exposing the need for a size of platform that can project air power of sufficient weight to fulfil the assigned mission. How quickly have we forgotten that the 'Invincible' class were procured over 20 years ago as 'Through-deck Cruisers' with a baseline capability as an Anti-submarine helicopter carrier and seriously undersized for their current role. The media are already referring to 'new *super* carriers', which clearly CV(F) will not be; not the first indication of the broad change in attitudes now required.

The future

What of the future? The SDR endorsement of larger 'purple' carriers is heartening but CV(F) will require capacity; capacity that permits an air group capable of whatever level of output is demanded, whether that be for peace support, coercion or ultimately combat. Above all it must be affordable. This does not translate into size directly – but steel is cheap and a larger ship does not necessarily result in proportionally greater costs The case for new carriers is well made elsewhere although the debate will undoubtedly continue until at least the first steel is cut and probably for some time thereafter. The vulnerability of Host Nation Support is repeatedly impugned as inconsequential but the loss of Saudi Arabian airspace in a recent Gulf crisis had a debilitating effect on the weight of effort available to deal with Saddam Hussein. The US led coalition became entirely dependent on air power from the sea to accomplish their mission and the UK military contribution became much more than merely a political statement.

Future Carrier Borne Aircraft

Meanwhile, the Joint Strike Fighter remains the prime contender as the Future Carrier Borne Aircraft (FCBA). The viability of the European Fighter Aircraft (EFA) in this guise remains a possibility though questionable given the considerable cost of marinisation, the current lack of any maritime strike capability and the availability of a CTOL version of JSF. FCBA will be a single common aircraft replacement for both Harrier FA2 and GR7 and will be able to operate effectively both afloat and ashore. More importantly, it will generate significant advantages through commonality and economy of scale; greater endurance; flexibility in tasking in a wide range of roles; improved supportability; significant savings in procurement, training, maintenance and logistic support. JF 2000 is an encouraging first step toward achieving this, initially establishing closer links and identifying the changes necessary in anticipation of FCBA's entry into service in the next millennium.

Capability

However, CV(F) and JSF are still concepts on the drawing board and for the next 10-15 years the CVS will underpin any joint capability. This stark reality calls for a change of gear mentally, and re-education as to what this really means. The Sea Harrier has always been deployed from the CVS in primarily a defensive posture, a fundamental keystone in the layered air defence of the task force at sea. It also has a credible maritime strike capability with Sea Eagle, a limited Air Interdiction/Close Air Support (AI/CAS) role with conventional and laser guided bombs, and a reasonable photo recce capability. The advantages brought by the GR7 are straightforward; their contribution permits

fixed wing heavy Carrier Air Groups of a size unachievable by the RN alone due to the continuing shortage of FA2 pilots and airframes. The recent addition of Thermal Imaging Airborne Laser Designator (TIALD) adds a designation capability that removes an absolute reliance on coalition partners for targeting and allays concerns over Rules of Engagement. Disadvantages are the lack of Paveway 3 and Recce pod. FA2/GR7 is a powerful combination of talent that allows each to play to their strengths although under-powered engines, relatively short endurance, lack of SEAD (Suppression of Enemy Air Defence) and overland AEW continue to be limiting factors.

Change

Operation Bolton witnessed the return of a credible offensive air capability last seen in 1982 during Operation Corporate, the Falklands conflict; in itself, a recollection of what used to be achieved from traditional carriers of yesteryear. This is not an invitation to reminisce but a gentle reminder that a fundamental tenet of maritime air power remains the support of the land campaign. This return of an offensive capability has been as rapid as it has been dramatic but has not been accompanied by the infrastructure necessary to utilise this capability to the full.

C^4I

Projecting air power is a complex process and success is heavily dependent on C^4I. The Gulf, as is so often the case, generated hybrid and somewhat novel command and control arrangements. This produced huge challenges to make the communications infrastructure match the organisational architecture in place. For Operation Southern Watch, the Joint Force Air Component Commander (JFACC) is co-located within the Joint Task Force – South West Asia (JTF-SWA) HQ at Eskan in Saudi Arabia and is responsible for planning some 200 sorties a day over Southern Iraq. Each mission package comprises some 30-40 aircraft launching from shore bases in Saudi Arabia, Bahrain and Kuwait as well as from two US CVNs and the UK CVS. Tasking is promulgated via an Air Tasking Order (ATO), a document too large to sensibly utilise conventional communications broadcasts.

Once tasked, an exchange of information between aircrew in all these diverse locations is essential to the Mission Planning (MP) process to ensure that these large packages are deployed safely into theatre. Data needs to be transferred electronically and then discussed over secure voice links. However there was little or no system compatibility between US and UK forces in the Gulf and communication was only achieved by an ad-hoc arrangement of bearers with a fragility that was worrisome. The GR7 had been deployed in the CVS with little cognisance of the supporting infrastructure necessary for effective operational employment. The majority of the hardware fitted onboard is for the flagship role which, in itself, can limit its very availability in such a scenario. Our US allies utilise E-mail via PC to PC satellite links for ATO and MP transfer, in the form of CTAPS (Contingency Theatre Automated Planning System) and SIPR-net (Internet-style hi-classified E-mail), and we must follow suit if we are not to risk being frozen out of future operations.

Unless better compatibility can be achieved, in the near term, utilising existing systems then there is an immediate and compelling requirement to purchase US CTAPS or NATO ICC, to be available for fitting in the CVS. The huge effort that we have seen focused to provide appropriate Information Technology (IT) support so successfully to embarked flag and HQ staffs (eg Pilot Joint Operational Command System or PJOCS) must now equally be directed toward the ship's staff for them to deploy this capability effectively. The current burgeoning plethora of IT systems must be stemmed and the view from the front line leans ever more heavily to Internet style architectures that allows users to 'pull down' information, architectures with which the current generation of school children, our future, are already accomplished and accept as familiar.

Maintenance of core skills

The carrier is not, as some would have it, a floating runway with a hotel underneath. It is a composite group of 1,200 people of diverse

talents and trades working as a single unified team to a common aim, day and night. That team must be exercised on a regular basis if it is to deliver output as and when required. It is equally important that the ship remains trained at operating aircraft as it is for the aircrew to be able to operate from it.

Maritime skills are just as perishable as any other, if not more so. Considerable effort is currently expended to sustain FA2 OC (Operational Capability) and further multi-skilling will demand even broader expertise in tactics, threat knowledge and recognition skills. The challenge will be the management of the training burden, balanced against the RAF's harmony concerns, to sustain a maritime cadre to meet the required readiness profile; a qualified *joint* pool of pilots, (particularly once night capability is declared), maintainers and support personnel.

Development

Aircraft tasked by the JFACC launch armed with weapons from onboard magazines on the authority of the Commanding Officer. We need to re-establish urgently the specialist air warfare expertise that we took for granted in the '60s and '70s. Augmentation of embarked Flag staffs by appropriate liaison officers is already being considered; however, a more permanent solution is needed, as the shortage of pilots does not allow us the luxury of constantly tapping embarked squadrons for the expertise that is lacking. It is time to populate shore based HQs and sea-going flag staffs with trained specialist personnel who understand air warfare. This applies equally at ship level where we must broaden our warfare officers' skills whose focus until now has been primarily 'anti-air'. To keep pace with our posture in *Invincible*, that process has begun and the 'Anti-Air Warfare Officer' (AAWO) has been re-styled the 'Air Warfare Officer' (AWO). Yet a change of acronym in itself does not confer capability or the necessary change in output. The removal of Sea Dart, the arrival of TLAM (Tomahawk Land Attack Missile) and the introduction of Link 16/JTIDs (Joint Tactical Information Distribution System) also demands a *joint* Air Warfare Centre/Maritime Warfare Centre led review of how the maritime air battle of the future will be managed and the tactical changes that will be necessary. We must re-orientate PWO, AWO and command training, embrace wider personnel exchanges and grasp the joint training opportunities afforded by the other Services.

Requirements

What else do we need to do? Firstly, GR7 integration needs to be developed faster and more aggressively. The running CVSs need an urgent injection of capability that will afford GR7 detachments similar status to other embarked aircraft types. The ship's onboard facilities must be enhanced at the earliest opportunity: second line servicing capability, workshops, test equipment, composite repairs, briefing and mission planning spaces, TIALD support, and more permanent spares support in place of the current 'carry-on' packs. The GR7 airframe urgently requires Telebrief as well as a recovery approach aid, suitable for all EMCON environments, such as differential GPS (Global Positioning System).

Secondly, aircraft must be fit for task and the more powerful Pegasus 1161 is fast becoming essential for both the FA2 and the GR7, an option that could be viewed as quite cheap if we begin to lose men or machines by persistently pushing both to the limits. That proposal is already being considered but must succeed on its merits alongside the planned improvements which must be preserved, particularly for the FA2 with respect to IN/GPS, Link 16 and ASRAAM (Advanced Short Range Air to Air Missile).

Thirdly, a Joint Force is not a panacea in itself; GR7 pilots joined the RAF not the RN and the inevitable and growing expectation of service at sea will be a deterrent for some. A radical review of fixed wing pilot recruitment, training, career profile, prospects and retention needs to be initiated now to identify how we attract, enlist and retain high quality people with the appropriate talent in order to strengthen the pool sufficiently to withstand the introduction into service of FCBA.

Project based approach

It is clear that a more co-ordinated approach is

required, a Service(s) wide approach that encompasses all these issues. Are we bold enough and brave enough to try something radical? Should we, and could we, establish a project-based organisation with a broad enough mandate, supported by the necessary funding [*no more jam tomorrow*] and, most importantly, underpinned with the AUTHORITY to implement the changes necessary to develop this capability until (and after) CV(F). This is not a new concept and has been employed very effectively in the past, but it has significant potential for future areas of development. Some may consider this naive, even wishful thinking; nevertheless, conventional peacetime methods are unlikely to suffice and it will not be long before we face very similar problems with Apache Longbow.

Summary

In summary, we need to adopt a broader vision of the future. The Maritime Contribution to Joint Operations articulated in the SDR demands a depth of understanding, expertise and organisational thinking matched to capability. The benefits of a Joint Force must be harnessed and the 'defence platform' concept evolved as we tread this path toward CV(F). The operational environment will be testing; as Lord Carrington once said 'The only thing I learned. . . is that the unexpected always happens.' The future is exciting, full of promise and challenge, a challenge that must be fully embraced at every level, a challenge that has already begun.

D.M.S.

Wolsey

IN 1950 we bought the coastal Thames barge *Wolsey* out of the trade and converted her to a yacht. She was 88 feet long with a beam of over 20 feet and, with the leeboards up, drew 30 inches.

In August 1951 we sailed her over to Ouistreham and up the canal to Caen. We had on board two other couples and a bachelor plus two ten to twelve years old children. We were approaching the Owers on our way home on the port tack in a westerly breeze and a good forecast. Without warning it blew up to SW force 8. Being on a lee shore, I put her about to head south and make some sea room but we were not quick enough getting up the starboard leeboard. The forward hanging parted and the board hung useless on its preventer chain. Shortly afterwards a heavy sea flung *Wolsey* on her side and the port leeboard fractured along the line of the chine. We never saw the bottom half again. We shortened all sail and started the engine which was not very effective under those conditions.

At dusk a coaster appeared and took us in tow but, at 2300, the tow parted in a vicious rain squall and we did not see the coaster again. I then found that, with the helm hard over and the engine full ahead, she brought the wind about 45 degrees on the bow but would point no higher. We had the wind on the port bow and I estimated that we were being driven northwards directly on to the coast to leeward. We therefore had to gybe round, losing precious ground, to bring the wind on to the starboard bow which I estimated would result in our being driven eastwards and parallel to the coast.

At 0200 we sighted the shore lights of Brighton and it became apparent that we were not going to weather Beachy Head. I planned therefore that, as we passed Newhaven, we must turn down wind and endeavour to round to in the lee of the breakwater. The coaster had made a distress signal on our behalf and we had fired distress flares. The Newhaven lifeboat was out looking for us but we did not see her or, indeed, anyone else. It made one feel a bit lonely.

When the critical moment came and the helm was put up we were horrified because she would not come away from the wind and turn to port. We set the staysail with some

difficulty which blew the bow round but precious ground had been lost and we were much further past the end of the breakwater than we had planned. We brought her round with the wind on the port bow which again gave us a course made good of roughly north but it now looked marginal whether this would bring us far enough west to get into the lee of the breakwater. I would have been less than encouraged had I known what I found out later that, in 1905 and under similar conditions, *Wolsey* had been driven ashore on the sand beach to the east of Newhaven with the loss of all hands.

At this point the skin fitting taking the engine exhaust through the starboard topside fractured and the engine was now exhausting into the engine room and a certain amount of water was coming in through the hole. However the gallant engine continued to function. The ship's head was west and we were moving slowly north past the end of the breakwater. We hoped, if we could get enough into the lee, to be able to make NNW and go through the entrance between the inner piers, but the delay in turning had, it became clear, put us dangerously too far east and we had a long and anxious vigil watching the red and green lights on the pierheads against the town lights behind. With each squall we lost ground. With each lull we made up a little. Safety seemed so close yet so far from our grasp. At long last they crept almost imperceptibly to the right and we eventually went sideways through the gap and were straightened up by giving the eastern pier a vicious bang with our starboard quarter. I have never been so glad to make port.

Later we motored *Wolsey* back to Chichester Harbour where repairs were made but, early in 1952, the Navy sent me to the Far East and, in the autumn, our first child arrived. When I returned, in 1953, we reluctantly decided that babies and barges were mutually incompatible and so she was sold. We helped the new owner to sail her back to the Thames and up to Chiswick Basin where she was to be based until he retired to take her and himself to Salcombe. We think that he died before doing this because our next news of Wolsey was from a gossip column which said that some well known actress was living on board with her current boyfriend. Later, in the 70s, we heard that she was at Isleworth and we visited her there. She was by then a houseboat. Her masts, sails, rigging and leeboards had all gone and she looked tired and scruffy. Still later, my son, he who had been the cause of her sale, was looking out of the window of an aircraft approaching Heathrow and saw what looked like a burnt out wreck in the berth where she had lain. He made his way there and found what were indeed the remains of *Wolsey*. About the only bit unburnt was the steering wheel. He plundered the wreck to the extent of one spoke of this which now hangs on a wall at Bosham as a memento of a fairly anxious night.

RUBBINGSTRAKE

New Thinking or New Opportunities in ASW

'It is universally agreed upon, that no art or science is more difficult, than that of the art of war; yet by an unaccountable contradiction of the human mind, those who embrace this profession take little pains to study it. . . This art, like all others, is founded on certain and fixed principles, which are by their nature invariable; the application of them only can be varied: but they are in themselves constant.'

Henry Humphrey Evans Lloyd *History of the Late War in Germany (1766)*[1]

Introduction

NEW thinking is often old thinking, or forgotten failures dressed up to something they are not. Using this as a yardstick, claims for 'new ideas' and 'new thinking' should always be carefully examined, as very often they turn out to be mutton dressed as lamb.

Aim

The aim of this paper is to give a brief historical overview of submarines and ASW, to outline some of the underlying principles, and offer some thoughts for the future of these two complementary disciplines.

Early operational submarines

The Royal Navy celebrates its 100th year of submarines in two years' time. In 2001 as the millennium begins the Service will commemorate the ordering and delivery of the first *Holland* class submarines, built under licence from the US Electric Boat Company. In the years before 1900 the submarine had raised strong emotion in the RN, though little constructive thought as to what the submarine meant to the nature of maritime conflict. In the frequently misquoted, but famous words of the 3rd Sea Lord and Controller of the Navy, Admiral Sir Arthur Wilson VC[2]:

> 'Damned underhand, damned unfair, and damned unEnglish'

He held a firm line that the RN submarines he had been instructed to procure were to be used to measure the effects of this new weapon in the hands of others. He did not see it as a weapon to be used by a great maritime power. He voiced his opinions despite the positive view of submarines held by the First Sea Lord, Admiral Fisher. Fisher, a submarine proponent, believed the submarine offered new opportunities for the Royal Navy. He also recognised its potential to undermine the ability of the Fleet to operate unhindered, but believed the benefits outweighed the losses.[3]

It is unlikely that Wilson was aware that he was echoing the words of Admiral the Lord St Vincent. Almost a hundred years before St Vincent had commented on William Pitt's payment to the itinerant American submarine inventor Richard Fulton. In 1805 Fulton was paid to demonstrate his submarine's design and potential. One can still sense St Vincent's choleric outrage as he roared:

> '[Pitt was] . . . the greatest fool that ever existed to encourage a mode of warfare which those who command the sea did not want, and which if successful, would deprive them of it. . .'[4]

The genesis of St Vincent's anger rests in the events of the American War of Independence. The United States, as a rebellious power in 1776, was the first nation to enjoy at least some practical success with a submersible war machine. With Bushnell's *Turtle* the new nation turned the dreams, and perhaps outlandish schemes of earlier inventors into a weapon of war. Although Sgt Ezra Lee failed to attach his mine to the British flagship *Eagle*, he had reached his target and made his escape almost undetected.[5]

Bushnell's achievements were independently furthered by the American pacifist and inventor Robert Fulton. Fulton took his ideas of a submarine boat first to Revolutionary France. He believed an effective submarine would destroy navies and rid the world of expensive and repressive armaments. He built the *Nautilus* under French patronage, and though a practical submarine, she was never used in action. The French refused to issue commissions to the crew, which would have meant that if captured they would have been executed as pirates. The association with submarines and piracy perhaps begins at this point in history.

Disappointed, Fulton subsequently took his ideas to Britain, found favour with Pitt, and disfavour with St Vincent.

Little was then to happen until in 1858 the French Ministry of Marine opened up a competition for the design and construction of a submarine. The competition resulted in some successful designs and the development of submarines was to continue in France over the next 40 years. By 1864 the Confederate States of America were successfully carrying out submarine attacks against Union naval forces using hand powered Hunley submarines. Some European nations watched these developments with interest. Using submarines commercially developed in the UK and Sweden, Russia, Greece, and Turkey became established submarine powers by 1886. These early submarines were steam powered boats of short endurance; however, the pace of technology was quickening and electric submarines had already been at sea in France for some five years. By the last decade of the 19th century John Holland in the USA had developed a petrol and electrically powered submarine. Once diesel had replaced petrol as the fuel, the Holland boats proved to be the model for the future.

The submarine grew in importance principally among the weaker naval powers. However, the most important technical developments in submarine construction were undertaken by gifted amateurs in the major industrial powers. This was not an unusual or uncommon occurrence in the mid to late 19th Century.

This brief outline of the development of the submarine in the 19th century does not reveal why the inventors tried so hard to master the technical difficulties they faced. The history of flight and aircraft is always much easier to explain as man has always aspired to fly. But notably each submarine designer had begun with a different motive, and few Governments had a clear operational requirement.

First roles and missions

Holland's primary motive[6] to build a submarine was what we would now call terrorism, and what he would have thought of as nationalism. He was an Irish immigrant and staunch member of the Irish nationalist movement. His first two successful craft were built for the Fenians in the US: he believed that his craft could by attacking the Royal Navy strike at the strategic heart of the British Empire. The French designers believed in the power of the submarine to remove the threat of another British blockade, and provide a robust and effective harbour defence. The Russians, Greeks and Turks saw the submarine as a logical development of the torpedo boat, the light forces of any major naval engagement.[7] Torpedo boats were growing in importance as the Whitehead torpedo was being marketed in increasing numbers. Therefore the principal roles of the submarine were:

a. *A weapon of terror.* A craft that could be effectively, and clandestinely deployed by a nationalist group in a *guerre de course* to strike at the 'occupying' power, damaging and threatening the prestige of the occupier.

b. *An anti-blockade weapon.* A weapon that could threaten blockaders, and thereby avoid the need to seek a decisive naval engagement between battlefleets. This strategy favoured the weaker naval powers, and was a strong motive for procurement by them. A sub-set of this defensive role was one of harbour defence, and anti-invasion work.

c. *A weapon to support the Fleet.* In this role the submerged, or submersible torpedo boats were to be part of the light forces in a major naval engagement. The latter part of the 19th and early 20th Century were to become dominated by the thinking of A. T. Mahan and his concepts of the decisive naval battle. It was as a part of this decisive engagement that a number of naval powers believed the submarine was to play its part.

The use of the submarine by a terrorist group never came to fruition, internal dissension caused a rift between Holland and the Fenians, and their naval ambitions had an ignominious end.[8] It was in the latter two roles that the submarine developed in the years before the First World War. These two roles have been described as that of 'spoilers and supporters.[9] On the one hand the submarine

was there to spoil the activities of an enemy's Fleet conducting a blockade; and on the other it was to directly support the Fleet in a major or decisive engagement.

Once adopted by all the major, as well as many minor Naval Powers, the submarine then became part of the 'normal' development of a weapon system. Technology continued to offer new opportunities, which in turn forced changes in tactical thinking, and finally the two were fused into an operational capability through effective and comprehensive training.

The Technology, Tactics, and Training cycle is captured in Doctrine. This T3D cycle is what underpins all warfighting disciplines. However, in a machine intensive environment such as submarine warfare the speed at which it occurs is fundamental to the effectiveness of the platform, and those who would oppose it.

Submarines in WWI

The T3D cycle of the First World War was dominated by the increasing range of submarines, and the growth of Wireless communications. The British focused on the submarine as a weapon for Fleet Support, but German development was to follow a different path.

Seen first as a vehicle to support the Fleet and counter any British Blockade the German Naval Staff recognised that the submarine could be used in a *guerre de course*. They were aware from the outset that it would be especially effective if it could be used in an unrestricted way, circumventing the established, but fledgling international Law of the Sea. By Feb 1915 the German Government issued their proclamation of unrestricted submarine warfare in the waters around Great Britain: of the 28 U-boats in service, four were maintained on operational patrols. By 1917, when unrestricted warfare throughout the Atlantic was declared, there were 100 U-Boats with about 20-25% on patrol at any one time. With these relatively small numbers deploying short range straight running torpedoes the U-Boats had an enormous effect on the Allied war effort. By the end of the war they had sunk over 12,000,000 tons of Allied shipping. This campaign against enemy shipping almost became a de facto blockade. The diversion of Allied resources and naval effort to counter the submarine threat was a significant drain on already stretched resources. This was not helped by the inability of the naval minds of the day to break away from the concepts propounded by Mahan, and seek a decisive battle to end the U-Boat menace. Their efforts were concentrated on the offensive: the hunting and destruction of these small craft, which were crippled by poor mobility, but invariably enjoyed the element of surprise. It was an exercise in futility. It took until April 1917, following near catastrophic shipping losses, before the Admiralty adopted the system of protected convoys.[10]

Principles of WWI ASW

The events of the WWI submarine campaign capture some of the constants of Anti-Submarine Warfare:

a. *Avoid.* The best way of countering the submarine is to avoid it, the sinking of submarines is a bonus and not a necessity.[11]

b. *Confound.* If the submarine cannot be avoided then its attempts to attack must be frustrated. Frustrating the submarine was a relatively simple business, the introduction of zig-zags or evasive steering was highly effective. Convoys emptied the sea of targets, and the presence of escorts and aircraft constantly harried the submarines preventing them from pressing home their attacks.

Avoidance was achieved through the production of the best operational intelligence picture, exploiting amongst other sources the new field of wireless communications intercept. The famous Admiralty Room 40, and its submarine tracking team were able to build a picture of German submarine deployments and provide invaluable advice and guidance on the routing of convoys.

The development of passive and active sonar, the depth charge, and the use of aerial reconnaissance also date from the First War. In passive sonar, harbour hydrophone arrays were used; and the passive sonar operators were trained using gramophone recordings of

submarine signatures. However, the key development to be taken forward after the war was active sonar, and with it the false hope of being able to neutralise the submarine threat. With little empirical evidence it became a common belief in the Royal Navy of the inter-war years that the submarine threat could be discounted. ASDIC would deny the submarine its one true virtue: surprise through invisibility.

Inter-war developments

During the inter-war years there was a trend toward the development of larger and more complex submarines. The French, believing in the submarine's ability as a raider, built the massive submarine cruiser *Surcouf* with 6" guns, and a seaplane. The Japanese, perhaps the most doctrinaire of all the naval powers, built submarines with seaplanes for reconnaissance, headquarters submarines to take a deployed submarine commander, and submarines mounting fast midget submarines; these craft were all part of the Japanese tactical plans for a decisive engagement.[12] After flirtation with a range of ideas and experiments, British submarines were principally small submarines designed to train ASW forces, and larger submarines for Fleet support. British doctrine was less rigid than that of Japan, but it was nonetheless in the spirit of Mahan. Submarines concentrated on engaging and sinking the capital ships of the enemy; with secondary tasks of reconnaissance, minelaying and other advance force operations for the Fleet.[13] The US followed similar patterns of development.

Inter-war roles and missions

For most Nations the submarine was seen as an adjunct to Fleet support operations, with the following missions:

a. Anti-surface warfare against the capital ships of the enemy.

b. Advance force reconnaissance. The Japanese took this to its most logical conclusion with the use of embarked sea-planes to increase the area covered.

c. Minelaying. The covert laying of offensive minefields was developed in WWI, and the building of specialist minelayers was to continue well into WWII.

Only one nation saw the submarine as a true 'spoiler': Nazi Germany. In the naval doctrine of the Third Reich the submarine was a complementary unit in what was to be a wider campaign of attrition led by fast, well armoured, and heavily armed surface ships. The German Navy looked to Sea Denial, vice Sea Control as their principal task, and the submarine was one of the key factors in any campaign of sea denial.

Inter-war ASW

On the other hand ASW in the RN in the inter-war period concentrated on the individual proficiency of ships in the use of ASDIC. Little was done to further any of the advances made in convoy protection, aerial reconnaissance, group tactics or the practical use of depth charges. This pattern was reflected in the tactical and operational development of other nations too, and is revealing as to how the submarine threat was perceived.[14]

Experiences of WWII

Submarine Campaigns

The success of the Nazi U-Boats in WWII in their 'tonnage war', which achieved a total of over 11,000,000 tons of shipping; and the slow, halting, crisis-driven response of the Allies is well known. However, the submarine campaigns of the British, Japanese and US Naval Forces provide useful insights too.

The US campaign was dominated at first by the search for capital ship targets; in the latter stages of the war they too began commerce raiding, and proved highly effective in mounting a blockade of Japan. The USN also used their submarines for reconnaissance, combat search and rescue, the landing and recovery of special forces and agents, and to some limited extent attacking targets ashore.

The RN conducted a similar campaign in the Mediterranean with the interdiction of Axis re-supply and reinforcement shipping proving to be one of the key roles. Submarines also undertook supply missions, ferrying essential if small cargoes to the besieged garrison in Malta.

Of all the submarine forces that entered the war, the Imperial Japanese Navy was perhaps the best equipped in numbers and diverse technology, though perhaps not in quality. The Japanese submarine service was hamstrung by an over complex and prescriptive doctrine, and never fulfilled its potential. Many Japanese submarines became troop and supply carriers as the noose around the Japanese possessions and home islands tightened. The crews were not trained to take the initiative, or work independently and they suffered great losses. However, they were to conduct some unique purely submarine mounted operations. The damaging of HMS *Ramillies* by Japanese midget submarines in harbour at Diego Saurez consisted of three phases: the reconnaissance and location of the battleship by the submarine's seaplane: a submerged approach to Madagascar; and finally the successful launch and attack by midget submarines. Such operations were all too few though to generate any real notion of a successful campaign.

The use of submarine-launched midget submarines by the Italians, the Japanese and later the British were on occasion to prove of disproportionate effect. The use of the British X craft (which began as a private venture) was to be of significance in the damaging of the *Tirpitz*, and the *Takao*. But the strategic effect of the attack by XE4 and XE5 on the main Hong Kong, Singapore, to Tokyo telephone cables cannot be underestimated. Today this operation would be seen as a model offensive Command and Control Warfare, or Information Warfare attack.

WWII roles and missions

In summary submarines were used in the following broad areas of strategic employment in the course of WWII:

a. *Actions which directly supported the activities of the Fleet:*
   (1) Anti-surface Warfare. Principally the interdiction and sinking of the enemies' capital ships. This was rarely conducted as part of a decisive naval engagement. In the main it was conducted by submarines deployed for advance force, or reconnaissance missions, or even deployed following the receipt of specific intelligence.
   (2) Anti-Submarine Warfare. Submarines claimed many of their own kind, by sinking them on the surface, and were deployed specifically to counter the threat posed by the enemies' submarines waiting in ambush. This was little used in the Atlantic, but the Mediterranean and Pacific campaigns saw many instances of these tactics.
   (3) Reconnaissance. The monitoring and reporting of enemy movements both afloat, and ashore was a crucial function performed by all submarines.
   (4) Combat Search and Rescue.
   (5) Landing of Special Forces for beach reconnaissance.
   (6) Navigational route and mine surveys.
   (7) Resupply and reinforcement operations for beleaguered garrisons.

b. *Clandestine Operations:*
   (1) Minelaying. The laying of offensive minefields off enemy ports
   (2) Landing and Recovering Special Forces and Agents.
   (3) The launching and recovery of midget submarines against warships in harbour, or at anchor.
   (4) The collection of strategic as opposed to operational level intelligence.
   (5) Command and Control, or Information Warfare. Instances include the famous 'man who never was' deception, or the severing of the Japanese telephone lines in South East Asia by British X-Craft.
   (6) The carrying of high value, or secret cargoes, such as gold, other scarce metals, and on occasion people.

c. *Guerre de Course*
   (1) Anti-surface Warfare, and principally in the interdiction of reinforcement and resupply shipping. This took two forms:
      (a) The tonnage war advocated by Dönitz. He saw the destruction of ships, either laden or empty as the principal aim of a submarine war. Late in the war the USN were to adopt similar tactics against the Japanese.
      (b) The sinking of laden ships to destroy the cargoes they were carrying. The RN were the principal proponents of this type of warfare in the Mediterranean.

Post WWII developments

In the period after WWII the key submarine development was the application of nuclear power to the submarine. This gave birth to the first true submarines, capable of fast, unsupported global deployment. With nuclear power came few new roles, with the exception of one that is easy to gloss over: deterrence. The specially adapted submarines of China, Britain, France, the Soviet Union[15] (now Russia), and the USA all carry ballistic nuclear missiles, and to the list of possible submarine roles and missions is added that of deterrence, or strike at the Strategic level; and now with the advent of precision guided munitions such as TLAM, to deterrence is added coercion.

In the post Cold War world, major trans-oceanic, or global conflict is not considered a high probability, and much of our effort is concentrated in conflict prevention, or Peace Support Operations (PSOs).[16] Using the virtues, which make the submarine such a potent warfighting craft, we are developing new roles in the context of a PSO. The seven deadly virtues of the modern SSN are:

Flexibility
Stealth
Availability
Endurance
Mobility
Autonomy
Reach

The ability to achieve fast, covert, self sustaining deployments makes the submarine an attractive option in the monitoring of embargoes; or surveillance during the establishment of a PSO which is an inherently unstable period.

In summary the submarine is a flexible multi-role platform. Almost all the roles discussed above, except for deterrence, can be undertaken by almost any submarine. Therefore, one of the key problems in Anti-Submarine Warfare is deciding what role or mission a submarine is engaged in. Without this knowledge defeating, or preventing the submarine fulfilling its mission becomes almost impossible.

Constants of ASW

Building on the key constants established from WWI, the last war has many powerful lessons with regard to ASW, and two further constants or principles can be added:

a. *Avoid*
b. *Confound*
c. *Evade.* Many ships were lost stopping to pick up survivors or remaining in the submarine danger area. Once a submarine has attacked, only ships specifically tasked should remain in the area.
d. *Destroy.* Coordinated attacks by a well rehearsed force mix are required. Attacking a submarine is imprecise, and is likely to take a long time and consume a considerable amount of ammunition. Sound technical knowledge of the submarine's characteristics is needed to design effective weapons.

Again it was to be the use of comprehensive all source intelligence coupled with simple defensive measures that were the most effective ASW tools at the outset of WWII.

The exception to the rules, or principles described above, is of course the submarine engaged in ASW. In this case surprise lies with the most patient, the best trained, the best equipped, and perhaps most importantly the best informed. Submarines are the only platforms capable of conducting offensive

ASW when neither sea control, nor air superiority have been established. In situations where air superiority has been established, but sea control has not, submarines and aircraft operating together make a powerful and effective team.

In summary, the most important lesson of both Battles of the Atlantic is that Technology, Tactics, Training and Doctrine (T3D) is an integrated whole. Neither technology, nor tactics can solve anything alone. It is the fusion of technology, tactics and comprehensive training against the background of a clearly expressed and understood doctrine that is the engine that drives all warfighting. It was the integration of operational intelligence, fixed sensors and fixed weapons (mines), seaborne and airborne sensors and weapons that was to prove the only effective method of finally countering the submarine. Yet even so there were casualties; to expect a defect free, or no loss ASW engagement for the prosecuting or escorting forces is a naive assumption.

New thinking or new opportunities

After over 100 years of submarines and anti-submarine warfare, including two titanic World Wars, there is little that we claim as new thinking. However, there will be new opportunities to exploit some of the ideas of the past that technology previously could not deliver. In this technology is the key variable of warfighting, along with what is perhaps the most crucial element: the creativity, cunning, and strength of the human operator. The constants are of course: time, timing, space, and the capacity of the human brain.[17] The most important revolutions are in material science, computer processing power, and our understanding of the ocean. Combining these factors together has given us sensors capable of delivering high quality data, but equally it has given us signature reduction measures that have the potential to cancel out each advance. Thus purely in sensors and signature, the hunter and the hunted have see-sawed around the mean of advantage, but neither has deviated far from it.

We cannot stop the investment in either signature reduction or sensors if we are to maintain the current dynamic equilibrium. So if we are to achieve breakthroughs and pursue new opportunities they are probably to be found in the development of better, faster, and more robust Command, . Control and Communications systems. Underpinning the ASW successes of the past is the production, interpretation and dissemination of intelligence; and at the operational and tactical levels the coordination of properly resourced ASW forces. ASW is a study in uncertainty: the precise location and intentions of the submarine are almost never established. The only way to counter such an amorphous target is to use every available asset, on, under and above the sea, in a well understood, and well practised coordinated approach. This is currently our most pressing technical and tactical challenge.

Conclusion

This paper has illustrated the diversity of solutions that nations have sought in their development of submarines. In an age of unmanned aerial, and underwater vehicles, it is interesting to note that both submarine launched manned aircraft and midget submarines were available and extensively used. This one example illustrates that after 100 years of submarines and ASW there are unlikely to be many new thoughts. However, as technology advances there will be new opportunities. These opportunities need to be developed against the background of the constants of ASW: *avoid* the submarine where possible, *confound* his attempts to attack, *evade* his attack and finally *destroy* him with superior force. Similarly submarine developments should build upon the seven deadly virtues of the submarine: *Flexibility*, *Stealth*, *Availability*, *Endurance*, *Mobility*, *Autonomy*, and *Reach*. The greatest of these virtues is Stealth. After all invisibility was the primary motivation for man's consistent attempts to disappear beneath the waves since Ezra Lee's abortive raid in 1776.

Submarines support the Nation, the Joint Commander and the Fleet at every level of war from the Grand Strategic to the Tactical. In the hands of an opponent it can spoil operations through the practice of maritime guerrilla

warfare, or through carrying out any number of other missions. The submarine is a force multiplier; it is and is likely to remain difficult to counter, with the potential to deny sea control to those that need it.

Finally, in a time of rapid technical development, the linkage between Tactics, Technology, Training, and Doctrine must be clearly recognised. Similarly as we exploit new opportunities we must never lose sight of the man who remains an inherent part of the warfighting system.

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A Case of Imperial Clothing

'There seems to be something wrong with our bloody ships today.'

Admiral Beatty, 1916

'I HOLD it as a general leading principle that there is nothing the Royal Navy cannot do.' Thus spake Captain W. Thornton Bates on the eve of the assault on Canton in 1857 and, incidentally, his own death in action. This sentiment and others like it underpin the Navy's view of itself down to the present day. Admiral Leach might have said something similar to Margaret Thatcher in April 1982; he and the rest of us certainly conducted ourselves as if we believed it to be the case. We have arrived at this perspective because in the trial of battle we have come off best sufficiently often to sustain our belief in ourselves. Often, but not always. Consider the blow to our pride at Jutland and the shock to the nation when *Hood* blew up and sank almost before the battle with the *Bismarck* had started.

The trial of battle is the usual way navies compare themselves with each other; test their rival myths, so to speak. But thankfully in this era of peace and international co-operation there is another technique for comparison open to the Royal Navy, too. A surprisingly large number of foreign navies send their ships to Flag Officer Sea Training so they can get the same preparation for war and other operations that the British service has. In the past couple of years ships from some sixteen navies have passed through FOST's hands, and more are showing an interest. In order to give them the quality training that FOST is famous for, the staff have to prepare themselves thoroughly for each ship's package and naturally they get to know them intimately in the course of working them up. In the last year, 48% of FOST's custom came from overseas; most of it was drawn from the European navies of NATO and the remainder came from the Middle East. It is not unnatural in these circumstances to compare like with like and to draw some tentative conclusions.

In conducting this comparison, it is important to remember that FOST staff sees ships through the microscope of sea training only. This has advantages and disadvantages for our purposes here; the microscope shows detail well but is not the instrument for seeing the whole picture at once. Much of the picture can be inferred from the detail, but by no means all. We cannot compare governmental attitudes, for example, or the upper reaches of command and control; nor, except by means open to all, can we assess the total strength of a navy. The cultural background throws up some sharp contrasts in the training process but the searider can have no expert opinion on the rival merits of the Mediterranean outlook compared with British phlegm. Time is not on our side, either. Ships come to FOST for 5-6 weeks, and what they do thereafter is their business, not the trainers'. Any comparison made between the performance of the Royal Navy in the long term and that of foreign navies must be left to others, who will arrive at their own conclusions.

During sea training, however, some valid comparisons can be made, and it is on these that I want to concentrate. They might be described as the *inputs* which go towards the make up of the overall quality of a ship and her company, or *output*. There is a list of '. . . abilities' to start with: the most important is capability and under the general heading of design, we may put habitability, maintainability and survivability. Then there is the quality of support; and programming. And finally, the people issues: the strength of the ship's company, measured in numbers, quality and attitude; and the commanding officer's own contribution at the top of the tree. What is the sum of his experience, professionalism, wisdom and courage?

Some of the navies who train with FOST do not really operate in the same league as the Royal Navy and they may safely be left out of any comparison. The navies that are of interest to us here are the Dutch, the Germans, the Portuguese, the Italians and the Turks. The Dutch and Germans have long trained with us and it will come as no surprise that they closely match our outlook; the Portuguese and Turks have modern ships and great determination; and the Italians, relatively late arrivals on the FOST scene, do not conform in

general to their historical stereotype.

Space is tight and in what follows few examples will have to stand for many.

Capability

In the Royal Navy we are very proud of the Type 23 and it is often described as the most capable ship of its size in the world. The command system has been something of a technological leap into the dark and although it's not yet fully operational, it is already proving to be more capable than any comparable system, such as that fitted in the Dutch M-Class. But the Dutch system works well now and has done for many years.

The 996 radar is excellent but, unlike its peers fitted in NATO ships such as the Dutch SMART system, it has reliability problems. The Seawolf system is more capable than its nearest NATO rival, Seasparrow, fitted in the M-Class; but it, too, is not as reliable as the NATO system for a number of reasons. The 4.5" gun throws a heavier shell than the Dutch or German 76mm (although the Italian and Turkish 5" is heavier still); and the 4.5" is markedly less reliable than any of these weapons. The NIXIE torpedo decoy favoured by NATO navies is far easier to deploy (thereby getting deployed more frequently) and is more capable than the obsolescent British counterpart, the Type 182. The German medium range sonar consistently outperforms our own Sonar 2050 in terms of initial detection range. It also usually holds the triplane target in the turn, through the stern arcs, at 24 knots and at ranges beyond those which 2050 can achieve under far more favourable conditions.

It would be unrealistic to expect all sensors and weapons fitted to RN ships to be superior to all their rivals in NATO. The claim that our ships are 'better' than anyone else's could certainly be supported by a less demanding criterion than that. But the question is, how much less demanding? Some of the RN systems are undoubtedly very good indeed, when they work. Compared with their NATO equivalents, however, the overall reliability of so many of them is poor enough *in practical terms* that it tends to erode the capability advantage where that exists.

Design

This is a huge subject and comparisons inevitably have to be rather crude. Put simply, though, the design of RN ships in terms of habitability and maintainability and, in some important respects, survivability is inferior to those of our nearest rivals. Both the Meko and the M-Class show what can be done for comparable money (particularly when throughlife costs are considered) if relevant operator experience really is brought to bear on the design problem.

Habitability. The interface between man and machine is particularly well considered in the M-Class. The implications of living in cabins and messes are carefully thought through and the result is noticeably more person-friendly. For example, every cabin is adjacent to a shower unit, which it will share with one other cabin. There are far fewer dirt and rust traps in Dutch ships; the same goes for the Meko. In both cases, these perennial bugbears of RN ships have been mostly designed out, thus saving many manhours of drudgery throughout the ships' lives. All doors and hatches can be easily opened by one person without effort or delay. From the bridge of the M-Class, you can almost see all round the horizon. It is higher than the funnel, so the stern arcs are nearly clear. Every person on the bridge is so positioned that he or she looks out of the window when not engaged in other tasks and all seats and equipment face forward. Unlike the arrangements in the T23, the bridge wing doors are easy to open and offer access that is unimpeded by foot-traps to the well sheltered wings. The M-Class ops room is laid out to a rational plan, light, uncrowded, clutter-free and pleasant to work in for long periods. It is even fitted with chairs that people find comfortable at the end of a long watch. The machinery spaces in the Meko are invariably spotless and their bilges are permanently dry because there are no leaks in the machinery itself. In both classes, the ship control centres are roomy, well considered spaces, laid out with the requirements of damage control in mind.

Maintainability. In the M-Class and the Meko the machinery is accessible and easy to maintain. One recently departed senior

engineer on FOST's staff (in a rare flight of fancy) describes the M-Class spaces as a Taj Mahal of engineering design. There is a robustness of design in foreign systems that means their ships are not wrong footed by a single point of failure, as often happens in RN ships. Flexibility of operation is built in, so that for example the STIR fire control radars in the M-Class can operate with any air weapon systems in the ship. A T23 recently presented itself at FOST for training with over 70 outstanding operational defects. A Dutch ship was under training at the same time with just one opdef. And these are not atypical figures.

Survivability. Is there any reason to suppose that the general robustness of our ships is greater than that of the foreigners? This is a difficult judgment to make but there is certainly no evidence that it is so. It is a maxim amongst FOST 'wreckers' (damage control specialists) that it is more difficult to 'break' ships of the M-Class and Mekos than it is to do the same to the RN. There are simply so many reversionary modes to be got through. They depend to a greater degree than we do on automated systems in damage control and machinery operation in particular, but rather than being a weakness, these are a source of considerable flexibility. When, through the infliction of 'damage', the staff do finally manage to reduce an M-Class or a Meko to operating without automation, in many cases this puts the ship at the point where the Brits start off.

Quality of support

I am aware of the difficulties of the Naval Support Command and have no wish to add to them here, but the bald fact is that many foreign ships undergoing training are better supported than their British counterparts. The most significant exception to this is the Italian Navy (whose support organisation seems to operate on the principle of out of sight, out of mind). Most get better value from their training as a result and do not have to wrestle with the awful frustration which is the lot of the Italians and, often, our people too.

Programming

People sometimes say, 'Of course the Dutch do well at FOST. They get weeks to prepare themselves for it and they *ought* to do a good job.' Well, quite. They do come properly prepared, fairly fresh and ready to learn. So do the Germans, Portuguese and Turks. By contrast, an RN ship falls out of some more or less ghastly maintenance period, the advantages of which are not always clear to the sailors, drags itself through a possibly truncated trials programme, gets a week's shakedown which might or might not be clear of residual trials, and wakes up bleary-eyed one Monday morning to find 60-70 seariders crawling around in the opdefs and dirt traps. This appears to be an experience we share, yet again, with the Italian Navy. There are good reasons, we are told, why the RN has to treat its people like this; but what are the practical effects?

Ships' companies

'Our Navy looks after us really well'. This is a remark not often heard on the lower deck of British ships, to put it mildly. But Dutch sailors often volunteer such sentiments unbidden. The biggest challenge facing most RN commanding officers during Operational Sea Training is to get their ships' companies screwed up to the degree of commitment shown by the foreigners. The Dutch, Germans, Portuguese, Italians and Turks send their ships for training in a very highly focused state indeed. The resilience shown by these ships' companies, almost without exception, in overcoming the language barrier, the cultural differences, the unfamiliar weather and work routines, the lack of support from home (in the case of the Italians) and the hard knocks contingent upon any work up period has to be seen to be believed. The Italians in particular excite the admiration of the staff; recently, a corvette came for training seriously under-prepared by her own authorities. At the staff sea check, so many deficiencies were discovered that consideration actually had to be given to whether it was safe for the staff to go to sea in her. But the ship's company absolutely refused to be defeated by the appalling task facing them and they departed five weeks later with a well-earned 'Very Satisfactory'

assessment and a *very* impressed set of seariders waving them good-bye. A rather better prepared Italian destroyer had come through some weeks earlier and got herself the rarely awarded 'Good' assessment.

These navies don't have gapping, although most of them still have conscription. Their people usually arrive for training well prepared, fresh and committed to the task in hand. Whatever the circumstances of their arrival they show a determination to succeed not always seen in RN ships, who, suffering as they are from all the stresses of gapping and tight programming, and sometimes lacking the grit manifested by many foreign ships, frequently show signs of succumbing to fatigue much earlier than might be expected.

Commanding Officers. Essential components of any successful work-up period are the qualities of the Commanding Officer. How do ours compare with their colleagues from other countries in terms of their leadership, experience, professionalism, wisdom and courage? Interestingly, foreign commanding officers tend to be about five years older than ours and to the RN mind this must give rise to questions about their stamina and fitness for the unique demands of command. Based on the results they achieve during sea training, however, there is no evidence that, on average, they are inferior; given the challenges they face, it is arguable that on average they do better than our people. In general they are at least as professional and rather more experienced. Their greater age – top of the scale is a 49 year old commander in command – lends a degree of gravitas sometimes missing from the younger man. Courage is notably difficult to assess in the piping times of peace; none shirk hardship, but that's not quite the same thing. One commanding officer from Portugal lost his father mid-way through training. He wept alone in the privacy of his cabin but neither he nor his ship broke stride and they went on to achieve a 'Very Satisfactory' assessment. I believe this shows a moral toughness of high order and, while only an isolated incident, it does seem to indicate that this quality is not the exclusive preserve of the RN.

Conclusions

The main conclusion to be drawn from all this is that, as measured through the precise but limited view given by Operational Sea Training, our ships and our men are not noticeably superior to those of some other navies. In some important respects the RN is decidedly inferior to some of its rivals; reliability of equipment and ship design, for example. Either this has always been the case, in which case we and our forebears have been deluding ourselves about our superiority for years; or we are seeing some unwelcome trends develop. Should we conclude that this matters, and if so, what should we do about it? These are, after all, tried and trusted Allies we are talking about, not potential enemies.

To most readers of *The Naval Review*, the answer to the first part of this question is presumably a resounding, 'Yes! It does matter!' For the doubting Thomases, let me offer a few reasons why this might be so. Firstly, reputations for excellence (such as we currently enjoy) are hard to come by. Once lost, they are even harder to get back. Secondly, reputations for excellence carry with them certain material advantages: a reluctance amongst potential foes to engage with you; a keenness amongst allies to be associated with you and to listen to your counsels; a desire by the world at large to be trained by you, even at a high price; a flourishing sense of self-worth contributing to success in any venture; a respectful public and grateful political leaders. Thirdly, an erroneous estimate of our own capabilities can lead to nasty shocks on the battlefield, as seen at Jutland and in the Denmark Strait. For all these reasons it probably really is quite important that we acknowledge that, even if there is not a serious problem yet, a set of unfavourable trends exists. It is possible that for most of the present generation of decision-making naval officers, the Navy's performance in the Falklands serves as a kind of psychological safety net. If we pulled the rabbit out of the hat against all the odds that time, the thought process goes, we can pull a rabbit (perhaps a smaller one, but a rabbit all the same) out of the hat in the future. In other words, when the chips are down we'll still

come out fighting to win. Perhaps we will. But it seems that the will and ability to succeed, at the level of the individual ship, is now just as great in each of the navies of Italy, Portugal, Turkey, the Netherlands and Germany as it is in the RN. In the 16 years since we wiped Argentina's eye, these navies have acquired excellent ships, and during Operational Sea Training it is all too clear that their determination to do well in them is at least as great as ours, and in some cases greater.

If it is easy to agree that there is a problem, it is of course far more difficult to see a way out of it. There are good reasons, some would say overwhelming reasons, why we are where we are today. But, as somebody once said, 'You always have a choice.' The challenge now and in the future is to recognise the true cost of the choices we make. Relative to some of our nearest rivals, we seem to be under-designing our ships and paying less attention to the interests of our people. Some of our important inputs are not as good as they might be, in other words, and in the long run we should not expect the quality of our output to remain as high as those navies whose inputs are better than ours. If we do not face this squarely, we may find that certain other navies will gradually become conscious that the Royal Navy no longer enjoys the superiority it once did. They may even say to themselves, 'This emperor is not wearing any clothes.'

GREEN JACKET

Is China Preparing for a Military Solution to the Spratlys Dispute? – II

Factors driving the dispute

IN attempting to assess the likelihood of China resorting to military force early next century to resolve the Spratlys issue, it is necessary to study the factors driving the dispute. To the casual observer, it may seem surprising that the Spratlys could be the flashpoint for major military confrontation. Only seven out of the hundreds of islets are over 0.1 square kilometres in size and the vast majority are no more than barren reefs awash at high tide. However, strategic, economic and nationalistic factors have combined to make the Spratlys a region of complicated claims and counterclaims with far reaching implications extending much further afield than the boundaries of the South China Sea.

The balance of power during the cold war era when US forces were stationed at Subic Bay and Clark Field in the Philippines and Soviet forces were based at Cam Ranh Bay in Vietnam reduced the threats to intraregional trade and international commerce passing through the area and deterred territorial disputes. Nowadays, despite numerous reassuring statements by the Clinton administration, there is a growing feeling among South East Asian states that America is turning its back on the region as it focuses more on domestic problems and European issues.[45] In the face of an ever diminishing defence budget, there is a widely held belief that the US can no longer be relied upon as a guarantor of regional stability, and in their absence China will become less restrained in its approach to the Spratlys issue. As the Singaporean Air Force chief, Brigadier General Bey Soo Khiang stated in a speech in early 1993, 'the reduction of the American military presence in the Asia Pacific region is likely to be destabilising. . . We will then have a region fraught with potential for a competition for influence.'[46] Eminent Chinese experts share this anxiety. Professor Li Ngoc, an expert on the Chinese military at Hong Kong University, suggests 'the Americans are pulling out. They are creating a vacuum that is energising the Chinese.'[47]

The economies of most ASEAN states, China and Taiwan are among the fastest growing in the world. All these economies are heavily dependent on trade, most of which is shipped via the South China Sea. Furthermore, the region is equally dependent on extraregional trade. It is estimated that up to 15% of the world's cross border trade passes through the South China Sea. Trade from other major economic powers such as Japan and South Korea must pass through the vital sea lines of communication (SLOCs) en route to and from Europe and the Middle East. These SLOCs lie to the north west of the Spratlys. Control of the archipelago therefore provides the dominant power with a significant geographical advantage on the global scene, with not only potential control over the SLOCs but also the ability to wield substantial influence and power over the entire region. In this scenario, the strategic importance of the Spratlys for shipping lane defence, interdiction and surveillance cannot be overstated, particularly when viewed in the light of Chinese regional power aspirations.[48]

Secondly, the enormous burden placed by China's population of 1.2 billion, increasing at a rate of about 14 million per year, on its diminishing land resources, whilst its economy has been the world's fastest growing for the past twenty years is focusing China on the protection and exploitation of the vast resources, notably fuel and fish, in the disputed waters of the Spratlys archipelago. Having become a net oil importer in 1994, at the current rate, analysts predict that China will be at least 20% short of the demand by the year 2000.[49] Although to date there has only been limited proof of the oil potential of the region, Chinese energy experts estimate that the South China Sea may possess more than 65 billion tons of oil and gas reserves.[50] An article in the China Geology Newspaper in 1989 suggested that surveys by the Chinese Ministry of Geology and Mineral Resources indicated the presence of an estimated 17.7 billion tons of oil and natural deposits in the Spratlys area alone.[51] The prospect of

discovering and extracting oil from the region, to sustain the country's impressive economic growth whilst reducing its reliance on coal as its primary fuel, must be a major factor in China's approach to the dispute. Resources other than fuel, such as deep sea bed minerals, phosphorous deposits or the energy potential created by marked vertical temperature differences in the water column (ocean thermal energy conversion) will undoubtedly attract the claimants' interest even if actual oil discoveries fail to meet the expectations. Additionally, the abundant fish stocks in the Spratlys region would go some way towards alleviating the worsening protein shortage problem on the Chinese mainland. Pressure is increasing not just on China but also on neighbouring states and other claimants of the Spratlys to enforce their declared EEZs, thereby legitimising their ownership and management of fishery resources. As a result there have been numerous clashes between naval forces and fishermen engaged in disputed waters in recent years, often leading to arrests. As recently as March 1995, China responded to the arrest by Filipino troops of four fishing boats and 62 Chinese citizens near Half Moon Shoal with a warning that it 'does not have limitless tolerance for encroachments on China's sovereignty and dignity, and that the other side must bear full responsibility for any serious consequence.'[52]

The third factor driving China's claims is seen to stem from domestic and nationalistic issues. Some experts have suggested that China's government is said to ameliorate a domestic constituency which has yet to reap the benefits of the country's rapidly expanding economy by adopting a firm stance on nationalist issues; hence, as Gerald Segal states 'Beijing's active and vigorous pursuits of claims in the South China Sea.'[53] Furthermore, as the Chinese leadership experiences the weakening effects of globalisation and localisation, Beijing could simply be demonstrating, both to its strengthening provinces and the international audience at large, that it remains firmly in control of national policy. President Jiang Zemin is also acutely aware of the importance of keeping the PLA happy in the aftermath of the death of Deng Xiaoping, and remembers their crucial role in the suppression of the Tainamen demonstrators. A more assertive role for the PLA(N) in the South China Sea may be the price that Zemin is willing to pay for the continued support of the military. At a lower level, the importance attached to sovereignty issues such as the Spratlys stems from the humiliation caused by the loss of territory during the disintegration of the Qing dynasty in 1911. Increased and focused national interest in the South China Sea is summarised by a Chinese scholar who proposed that 'Beijing intrinsically sees its policy as a long overdue and legitimate action to protect its sovereign territorial integrity. . . It is embedded in the national psyche that the Spratly archipelago has been a part of (China's) territory since ancient times.'[54] National pride would be severely damaged if, after having lost territory to Western powers in the last century, Beijing were seen to be softening on the Spratlys dispute. In addition, the introduction and acceptance of far reaching market reforms has called into question the legitimacy and justification for continued authoritarian rule. The pursuit of China's sovereignty claims on remote islands in the Spratlys archipelago, by the erection of markers or drilling for oil, may also be seen by the leadership as a low risk means to bolster its popularity.

The fragmented nature of China's foreign policy decision making process is another domestic issue which has influenced China's approach to the Spratlys dispute and may also help explain Beijing's contradictory statements and actions in the past.[55] Chinese foreign policy is essentially formulated by the leaders of four organisations; the Politburo Standing Committee, the PLA, the Ministry of Foreign Affairs (MoFA) and the Ministry of Foreign Trade and Co-operation. This bureaucratic arrangement is influenced by key personalities with the greatest interest on issues in question and occasionally lacks central oversight. The contradictory hard/soft line taken by Beijing over the Spratlys conflict, although witnessed in other territorial disputes, is the likely result of long standing disagreements between the PLA(N) and the

MoFA. The navy has often engaged in assertive action in the region in its belief that it is acting within its mission to protect China's territorial integrity, whilst the MoFA has persistently issued conciliatory statements to its neighbouring states. The navy apparently enjoys the support of a number of ideological conservatives within both the military and civilian leadership. In fact, there were disagreements between the more conservative factions and the MoFA over the exact wording of the 1992 territorial waters law, with the former calling for the specific identification of the Spratlys whilst the latter urged for a less belligerent tone. In addition, some experts believe that the PLA(N) may have succeeded in pushing the law through while the MoFA and the leadership were focused on other issues.[56] This may explain the ambiguity over the extent of the Chinese claims. On the one hand, Foreign Minister Qian stated at an ASEAN meeting in 1995 that 'China has never claimed that the South China Sea is the territorial waters of China', whilst Pan Shiyang, a retired naval officer who is believed to represent PLA(N)'s view, has repeatedly voiced China's historic claim to the entire sea.[57]

Domestic and international constraints

Despite the numerous forces and incentives driving China's claims on the Spratly islands, accompanying a significant shift in military strategy and sustained modernisation programme, there still remains cause for optimism. Internal and external issues, ranging from economic reform and internal instability to political developments and progress within ASEAN, combine with the increasing importance of economic interdependence and a continuing, although smaller, likely US military presence to make the pursuit of a peaceful, negotiated solution to the Spratlys dispute a possible attractive alternative for Beijing.

Between 1977 and 1987 China doubled its per capita output. According to the World Bank's purchasing power parity (PPP) estimates, China became the second largest economy in the world in 1994 with a GDP of about $3 trillion.[58] Some observers believe that China's total economy could surpass that of the US within a decade. The Asian Development Bank forecasts that Chinese per capita income will rise to the equivalent of 38% of that of the US by 2025, equalling that of South Korea in 1990. Whether these predictions are realised or not, what is certain is that economic reforms must continue to improve the living conditions of the majority of China's population in line with Beijing's policies.[59] China's economic growth is crucially dependent on the international economic system. It is currently the largest recipient of World Bank multilateral aid, estimated at $3 billion per year. China firmly believes that United States, Japan and the European Union will continue to be its major source of high technology, capital and markets. Furthermore, China's economic growth has been reliant to a large extent on the capitalist world system. It is burdened with external debts of about $120 billion and its external trade dependence in 1995 amounted to 56% of its GNP.[60] It is therefore unlikely that China will wish to upset or intimidate its neighbouring states and vital economic partners while it is trying to attract foreign investment, extend its markets and achieve full integration into the world economy. As Premier Li Peng stated in 1992 'we are ready to join other countries in making efforts and contributions to the maintenance of peace and promotion of economic development in the region'.[61] Although it would be naive to suggest that economic interdependence alone would prevent the use of military force by China to settle the dispute, what is clear is that it certainly contributes to regional stability by reminding the claimants of the potentially huge economic costs of pursuing such a course of action. Similarly, as China seeks to assume an international role commensurate with its rising economic power, whilst becoming an active member of the United Nations Security Council, certain constraints will limit its ability to take unilateral action. As President Clinton told President Jiang in 1995, 'We welcome China to the great power table. But great powers also have great responsibilities.'[62]

As mentioned in a previous section, a side effect of the sweeping market reforms in

recent years is the insecurity being experienced by the Chinese leadership as a result of its legitimacy being questioned. This development may also give an indication of Beijing's military priorities, and more specifically, the importance it attaches to its own survival in the face of growing instability throughout the country.[63] Within the army, only a small percentage of units (special forces and rapid response units) are programmed to be modernised, and are expected to be stationed around Beijing. Ironically, Chinese strategists argue that its soldiers are deployed to protect the capital from the ever reducing Russian forces. However, the focusing of its modernisation efforts on so few units may suggest that the primary objective is the protection of the Chinese leadership in the event of internal civilian unrest. The frantic pace of economic progress has led to massive internal migration, possibly up to 100 million strong, drifting from the countryside to most large cities. The absence of control on these transients is accompanied by underemployment within the cities and increasing bribery and corruption. The scale of the problem and its threat to stability were highlighted in an article in 1993 in the Shanghai newspaper *Wenhuibao*: 'The floating population, which exists without the normal controls, is fertile soil for the growth of secret societies. If they get together and form organisations, then the large group of people without a steady income will be a great threat to stability. If they join with the millions of unemployed in the cities, then the results will be even more unimaginable.'[64]

Notwithstanding China's desire not to 'internationalise' the dispute, the strategic importance of the region continues to attract the attention of the United States administration. As a result of the Vietnam war legacy, direct US military involvement in another South east Asian conflict is unlikely unless US property and lives are threatened. However, as Joseph Nye, the former assistant Secretary of Defence for International Security, warned in 1995 'if military conflicts in the area interfered with freedom of the seas, then we would be prepared to escort and make sure that free navigation continues'.[65] The US approach to the region was detailed in a Department of Defence security strategy report in February 1995 which specified the maintenance of about 100,000 troops in the area whilst assisting with the development of multilateral institutions as a reinforcing mechanism.[66] This is in line with official US policy[67] on the Spratlys issue which is as follows:

> The US urges peaceful settlement of the issue by the states involved in a manner that enhances regional peace, prosperity and security.
>
> It strongly opposes the threat or use of military force to assert any nation's claim to South China Sea territories and would view any such use as a serious matter.
>
> It has strategic interest in maintaining maritime lines of communication in the region and considers it essential to resist any maritime claims beyond those permitted by UNCLOS.[68]

The current trend of frequent port visits by US Navy ships to China, Vietnam, the Philippines and other states looks set to continue as a means of building confidence between political and military organisations, whilst at the highest levels the process of 'constructive engagement' contributes towards engendering trust between Washington and Beijing. Visits by high ranking serving officers, such as that of Admiral Prueher, Commander in Chief of the US Pacific Command, to Hanoi in 1996 are equally of significant diplomatic importance. By highlighting existing treaty obligations, advocating the peaceful development of the resources of the disputed region, supporting multilateral regional security dialogues and strengthening military ties with all interested parties the US can further assist with the establishment of a stable environment where unilateral military action is less likely to occur. In addition, the continued presence of US forces in the area, together with the significant military superiority the US will enjoy for the coming decades, is likely to underpin regional security for the foreseeable future.

A role for ASEAN

Regional attempts to resolve the Spratlys dispute, as supported by the US and other

external powers, offer a realistic opportunity to succeed. ASEAN has now become the focus of diplomatic interaction and confidence building activities in pursuit of regional security.[69] A solid working relationship is mutually beneficial to China and the ASEAN states.[70] In recent years ASEAN states have been supportive of the Chinese leadership in the face of increasing criticism of its record on human rights and political freedom from the west. The scale of the economic interaction between the states has already been highlighted and, estimated at over $20 billion, provides a tangible incentive for continued co-operation and interaction. A strong relationship with China, as the emerging regional power, is also vital for ASEAN. Although the effectiveness of ASEAN has often been questioned, major progress has been made in recent years against an environment better suited to regional stability. As the Chinese Foreign Ministry spokesman, Shen Guofang remarked after the second ASEAN–China meeting in June 1996, 'The two sides exchanged views on issues concerning bilateral relations; the regional situation; and the surrounding security environment in a friendly, harmonious and candid atmosphere, and reached extensive consensus. China is satisfied with the smooth growth of friendly and co-operative relations with ASEAN over recent years, and is delighted at the effective co-operation between the two sides on international and regional affairs.'[71] The three main reasons helping regional developments are considered to be:

> The unlikely possibility of a major war in the region.
>
> The establishment of common interests, objectives and values resulting from economic interaction.
>
> The continuing development of existing and new networks, enabling participating states to pursue the goal of multilateral co-operation.[72]

Inspite of several factors such as historical mistrust, conflicting maritime claims and increasing defence spending threatening diplomatic progress, two main institutional tools have been established as the framework for regional stability. The political body, the 21 member ASEAN Regional Forum (ARF)[73], and the 18 member economic organisation, ASEAN Regional Pacific Economic Co-operation (APEC)[74], have contributed significantly toward an emerging multipolar regional order. Having previously focused on inevitable issues such as the civil war in Cambodia, ASEAN adopted the Spratlys dispute as its primary concern affecting regional stability in 1990. At that time, ASEAN member states embarked on the first of a number of informal meetings called specifically to discuss whether the lessons from ASEAN regional co-operation could be used to resolve or prevent possible conflicts in the South China Sea.[75] At a summit meeting of ASEAN Foreign Ministers in 1992 it was acknowledged that the association would have to play a more active part in the resolution of security issues in the region. This led to ASEAN's first formal statement on the Spratlys in 1992, known as the Manila Declaration, which repudiates the use of force to settle territorial claims. This was followed, in 1993, by the establishment of the ARF, which is supported by a region wide network of intellectual institutions for unofficial dialogue and consultation, known as the 'track-two' institutions.[76] Since the early 1990s the Spratlys have featured in annual ASEAN and regular ARF meetings, and at a meeting in Huangshan, China in April 1997 the territorial disputes were included on the official agenda for the first time. From December 1997, after promising signs of progress in the previous twelve months, the ASEAN heads of government will hold informal annual meetings with their counterparts from China.

The ASEAN and ARF initiatives will only succeed with the full participation of all the major powers, particularly China. It has so far been an active player in all the confidence building measures agreed in 1995, and has gone some way towards allaying the fears of its smaller neighbours by adopting a more transparent posture and publishing its first defence White Paper. Notwithstanding the arrival of Chinese forces on Mischief Reef in early 1995 other developments in the

following months indicated an element of softening and compromise on the part of the Chinese leadership. China has always been reluctant to embark on joint exploration and development initiatives together with all the parties in areas of the Spratlys claimed by a number of states, preferring to deal bilaterally instead. Nevertheless, it has agreed to pursue a solution working multilaterally with ASEAN through the China ASEAN Senior Officials' Meeting.[77] It has also expressed a willingness to resolve the dispute by peaceful means as required by international law and UNCLOS 1982, and displayed an interest in negotiating a code of conduct based on the 1992 ASEAN Manila Declaration with the other claimants. It also withdrew most of its naval units from Mischief Reef and invited Philippines fishermen to use it. Further developments were reported in the Hong Kong newspaper *Zhongguo Tongxun She* in August 1995, when China's position indicated a proposal to shelve disputes whilst facilitating joint development.[78] Meanwhile, the first deal between China and any of the other claimants was signed by China and the Philippines later that month, providing a framework for discussion on co-operation in the overlapping zones,[79] followed by a further agreement between China and Vietnam.

Notwithstanding the marked improvement in the relationship between China and the ASEAN states, there still remains a number of disputes and disagreements between the vastly disparate cultures within South East Asia, and, of equal importance, the uncertainty of China's emerging regional role in the 21st century. Concurrent with increasing economic prosperity, the majority of ASEAN states have embarked on modernisation programmes for their armed forces providing further constraints on Chinese assertive behaviour in the South China Sea. This has been accompanied by the requirement to protect own national resources in potential areas of conflict out to the 200 mile EEZ limits. Recent or planned acquisitions in the region include Indonesia's purchase of 12 Russian Mi-8 troop carrying helicopters, 24 Hawk fighters, and 39 ships, albeit limited in range and capability, from the former East German Navy. Malaysia has improved its military power drastically with F-18s from the US and Russian MiG-29s, and plans to embark on an ambitious naval procurement programme, whilst Vietnam will be taking delivery of a second batch of Su-27s. Although the combined forces of the ASEAN states are still no match for those of China, even on the assumption that member states put aside their differences and formed a cohesive military alliance, the consensus likely to form against possible Chinese aggressive acts in the Spratlys would be a further disincentive against the use of military force.[80] Furthermore, in the absence of the certainty of success of any military venture in the South China Sea, China would be unlikely to risk its highly capable but scarce surface combatants, fighters or submarines, needed to ensure victory.[81]

Military confrontation, or joint development and co-operation?

In summary, over recent years, several littoral states have reaffirmed their claims on the widely dispersed islets, sandbanks and reefs that make up the Spratly archipelago, and the surrounding waters. The most assertive claimant has undoubtedly been China, which, as recently as 1995, used military forces to pursue its sovereignty claims. In 1992, the Chinese regime passed a law on territorial waters effectively claiming the entire South China Sea as its own. Although repeatedly stressing that it would not use force to pursue its claims, in 1996 Beijing announced that the waters under its national jurisdiction had increased to some three million square kilometres following its ratification of the 1982 United Nations Law of the Sea convention. These developments have taken place concurrently with a shift in military strategy and an ambitious modernisation programme supported by an ever increasing defence budget, in the absence of an external threat to China. However, in relative terms, when considered against the size of the country and a standing army about three million strong, its defence expenditure falls somewhat short of that required for China's ambitious process.[82] In political terms, China

is emerging as a more confident regional power, with a developing military capability matching its economic strength and perceived international status. Militarily, the PLA remains essentially a land based force. As Dr Solomon Karmel suggests, 'while the Chinese Army has created pockets of modernisation it is still primarily a *standing* army with traditional security concerns and limited international ambitions.'[83] These concerns reflect China's long standing insecurities stemming from internal instabilities, and focus on the suppression of domestic rebellion and the protection of the Chinese regime from a mass uprising.

Although there may be several compelling nationalist incentives for the Chinese leadership to adopt a more aggressive stance on the Spratlys issue, Beijing is also subject to a plethora of domestic and international constraints. Firstly, economic reform is likely to remain Beijing's top priority if China is to become a strong, stable and key member of the international community. Secondly, to maintain this progress, China's interdependency on its neighbouring states and major global economic powers is set to increase. This will place direct limitations on China's options for resolving the Spratlys dispute, and dissuade her from resorting to military action. Additionally, if China seeks to play a greater role, and have a bigger say as a permanent member of the United Nations Security Council, she will be compelled to behave in a pragmatic and responsible manner when addressing maritime and territorial grievances. Thirdly, the US has stated that it will maintain a military presence in the region, and, due to the area's vital economic and strategic importance, it is reasonable to assume that this commitment is unlikely to diminish. Whilst not acting as the sole guarantor of regional peace, its pledge to support the drive for multilateral agreements will underpin the efforts of ASEAN and the ARF well into the next century.

China is clearly the strongest military power in the region, but it remains severely constrained in terms of operational capability and technological prowess. At present it possesses neither the capability nor intent to launch prolonged, offensive operations far from its shores, against reasonable opposition deep into the South China Sea to claim the Spratly archipelago. Its military modernisation programme will continue as the inevitable result of a nation with a strong economy emerging from isolationism, seeking to establish itself within the international community. The Chinese leadership is likely to be too wary of public opinion and anxious not to upset its neighbours and economic partners, thereby risking further economic progress and political and social stability. More specifically, the modernisation of its fleet is simply a recognition of the perceived importance of the sea relative to continental territory, and will enable China to protect the oil exploration structures and facilities in the South China Sea whilst strengthening the government's position in any regional negotiations. In the future, China will wish to protect its economic interests by establishing arrangements in the South China Sea that permit the joint development of the region by all the claimants whilst shelving its sovereignty claims. It has repeatedly expressed its interest in resolving the dispute by peaceful means as required by international law and UNCLOS 1982, and in accordance with the 1992 ASEAN Manila Declaration. Its recent willingness to sign bilateral 'codes of conduct' agreements on the subject of joint development will support China's desire to avoid the more sensitive approach of multilateral talks, although recent developments suggest that these too will feature between the heads of government at future summits. Joint ventures, mutual assistance and increased co-operation, between two or more claimants, are therefore likely to form the basis for resolution of the disputed waters, whilst the more problematic issue of sovereignty enjoys a prolonged status quo on the political sidelines.

(concluded)

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[83]M. Valencia, 'Asia, the Law of the Sea and International Relations', *International Affairs*, Apr 97, p.263-282.

[46] M. Gallagher, 'China's Illusory Threat to the South China Sea', *International Security*, Summer 94, p.173.
[47]M Salameh, 'China, Oil and the Risk of Regional Conflict', *Survival*, Winter 95/96, p.133-146.
[48]M. Valencia, *Adelphi Paper 298*, Op Cit n.5, p.3.
[49]P. Ritcheson, 'China's Impact on Southeast Asian Security', *Military Review*, May '94, p.44-57.
[50]J. Zhan, Op Cit n.24, p.197.
[51]This compares with 13 billion tons for Kuwait and ranks fourth in the world.
[52]P. Young, Op Cit n.12, p.19.
[53]G. Segal, 'China Changes Shape: Regionalism and Foreign Policy', *Adelphi Paper 287* (London: Brasseys, 1994), p.45.
[54] W. Dobson and M. Taylor Fravel, Op Cit n.6 p.261.
[55]Ibid, p.260.
[56]M. Valencia, *The Pacific Review*, p.62.
[57]W. Dobson and M. Taylor Fravel, Op Cit n.16 p.260.
[58]S. Kim, Op Cit n.16, p.247.
[59]Following the end of the Cold War, and the demise of the Soviet threat, there has been a significant shift in China's security strategy. It is now perceived to be driven by the creation and maintenance of favourable international conditions supporting the continuation of reform based economic development. On this assumption, China's foreign and security policies have become inextricably linked with domestic economic reform.
[60]In 1996, China's bilateral trade with the US was registered at $39.5 billion surplus.
[61]A. Shephard, Op Cit n.4 p.192.
[62]J. Nye, Op Cit n.29, p.76.
[63]M. Gallagher, China's Illusory Threat to the South China Sea', *International Security*, Summer '94, p.169-194.
[64]Ibid, p.189.
[65]M. Valencia, *Adelphi Paper 298*, Op Cit n.5, p.27.
[66]J. Nye, Op Cit n.29, p.76.
[67]M. Valencia, *Adelphi Paper 298*, Op Cit n.5, p.25.
[68]Following the seizure by Chinese forces of Mischief Reef in early 1995, the Washington administration reaffirmed its position with a statement from the State Department with a reminder that it would not take sides in the dispute and 'that these conflicting claims should be resolved peacefully, that we see no justification for any threat or use of military force and that we would view the threat or use of force as a very serious matter'.
[69]ASEAN was founded in August 1967 by Thailand, Malaysia, Indonesia, the Philippines and Singapore. It now includes Brunei, Vietnam, Laos and Myanmar.
[70]As China's Foreign Minister, Qian Qichen, stated in July 1995, 'the top priority of China's foreign policy is to maintain a stable peripheral environment so as to safeguard normal economic circumstances at home. China regards the establishment of long standing and stable good relations with ASEAN as an important factor in attaining this goal.'
[71]RUSI *International Security Review 1997* (Weymouth: Sherrens Printers, 1997), p.286.
[72]J. Almonte, 'Ensuring Security the 'ASEAN Way', *Survival*, Winter 97/98, p.80-92.
[73]The ASEAN Regional Forum (ARF) first met in July 1994 in Bangkok. It currently includes Australia, Brunei, Cambodia, Canada, China, the European Union, India, Indonesia, Japan, Laos, Malaysia, Myanmar, New Zealand, Papua New Guinea, the Philippines, Russia, Singapore, South Korea, Thailand, the United States, Vietnam.
[74]The ASEAN Regional Pacific Economic Co-operation (APEC) was initiated in 1989 and now includes the nine ASEAN states plus Australia, Canada, Chile, China, Hong Kong, Japan, Mexico, New Zealand, Papua New Guinea, South Korea, Taiwan and the US.
[75]D. Stuart and W. Tow, *Adelphi Paper 299*, Op Cit, p.42.
[76]J. Almonte, Op Cit n.72, p.81.
[77]P. Ritcheson, Op Cit n. 49, p.123.
[78]RUSI *International Security Review 1996* (Weymouth: Sherrens Printers, 1996), p.322.
[79]Panels of experts have been set up to possible joint co-operation in the disputed area on issues such as fisheries, meteorology, pollution, piracy and exploitation of oil and gas resources.
[80]China could also face a coalition made up of the Five Power Defence Agreement (FPDA) member states. Forces from Britain, New Zealand and Australia regularly exercise with their Malaysian and Singaporean counterparts. Most recently, the CVS, HMS *Illustrious* and the SSN, HMS *Trenchant* joined over 20 other warships and more than 50 aircraft for Exercise FLYING FISH in the South China Sea in April 1997.
[81]A. Goldstein, Op Cit n.43, p.51.
[82]As a comparison, Japan's Defence Budget for 1996 was $56 billion, well in excess that of China's.
[83]Taken from a lecture given by Dr Solomon Karmel at JSCSC, Bracknell on 29 Jan 98.

NATO Planning Considerations for Kosovo

Introduction

THE Belgrade Agreement, finally brokered at the eleventh hour by Ambassador Holbrooke and President Milosevic to end the fighting in the Kosovo region, illustrated the power of diplomacy backed up by a credible threat of force. Although this agreement heralded the end of the brutality and misery for the thousands of internally displaced persons (IDPs) and averted a potential humanitarian disaster, the effectiveness and longevity of this agreement have yet to be determined. The requirement for the maintenance of a credible threat of force to ensure compliance remains, as highlighted by the initial 96 hour and subsequent 10 day extension of the threat of NATO air strikes when insufficient progress was being made by the Serbian security forces to withdraw from the region. However, the maintenance of this threat for an unspecified period in the future places high demands on those forces and requires solidarity of political opinion within those contributing countries if it is to remain effective. In addition to capability, the threat of force must be backed up with the political will to use it should non-compliance be evident. At the time of the initial Activation Order authorising air strikes, the prospect of 2,000 Organisation for Security and Co-operation in Europe (OSCE) monitors being deployed on the ground was not envisaged and therefore the threat of reprisals against civilians belonging to NATO countries was not a primary consideration. Subsequently, although the involvement of NATO has changed in response to new political initiatives, the requirement for NATO to provide the force should deterrence fail, has not, which has placed additional constraints on the credibility of that threat. This paper aims to analyse the demands of the Belgrade Agreement and determine the planning considerations for NATO forces in the event of non-compliance by either of the parties: the Federal Republic of Yugoslavia (FRY) and Kosovo Liberation Army (KLA).

Analysis

The Belgrade Agreement demands that the following five issues be guaranteed:

1. The cessation of all hostilities.
2. The Serbian security troops sent to Kosovo must move out to FRY/return to garrison.
3. International monitors are allowed to enter the region and be granted Freedom of Movement (FOM).
4. Humanitarian relief agencies to be able to help the thousands of IDPs.
5. Autonomy negotiations with the Kosovars must be brokered.

The first major concern of this agreement is that the term compliance, refers to all aspects of the above and not portions thereof, making the determination of compliance by the International Community (IC) difficult. Although some of the terms of the agreement can be implemented and verified quickly, for example the international monitors being allowed to enter the region and granted FOM, autonomy negotiations are significantly harder to monitor. This issue is further compounded by the lack of a timetable with specific goals to be achieved at certain times during the negotiations. The verification process is made harder by the fact that the many international organisations (IOs) and non-governmental organisations (NGOs) will be reporting on the effectiveness of the agreement on the ground, but these reports will not be verified by NATO ground forces. The air verification regime established by NATO utilising manned and unmanned aircraft will provide some corroborating data; however, the utility of these flights during the winter months is degraded. Although the 2,000 OSCE monitors deployed on the ground as part of the agreement have been provided with a five square kilometre area to supervise, the task of verifying compliance even within this small area is problematic. The determination of correct troop and equipment levels in the region requires not only accurate data, but also a deep knowledge of equipments and modifications to them. Although the OSCE does have people qualified to make these assessments, it is unlikely that all of the 2,000 monitors will have the necessary expertise. The Jugoslav National Army (JNA)

have a great deal of experience of verification procedures in Bosnia and even today, training and movement bans are being imposed by SFOR for flouting the rules regarding troop and equipment levels at inspection sites. This agreement makes no mention of what constitutes non-compliance and more importantly what the penalty will be. Without NATO troops on the ground to enforce penalties, all NATO can do is record the instances of non-compliance and be prepared to act once a pre determined threshold is surpassed. Even if the OSCE report instances of non-compliance, the likelihood of NATO air strikes based on information provided by third parties is considered low, therefore the credibility of the threat of force diminishes. President Milosevic has shown himself to be a master of brinkmanship and any wavering in NATO's resolve to use force against his security forces will be viewed as a sign of weakness and exploited to the full. This will also reduce the confidence of the IDPs who are currently too frightened to remain in their villages overnight and strengthen the resolve of the KLA to continue their fight against Serbian forces.

The success of the agreement depends upon the support of both parties; however, the KLA has criticised the Belgrade Agreement since it allows only for negotiations concerning the autonomy of Kosovo within Serbia and not for full independence. Despite suffering severe losses during the year, the KLA has harnessed widespread support among the ethnic Albanian majority and is unlikely willingly to surrender and enter negotiations whilst Serbian forces are perceived to remain 'in occupation'. Much suffering has been endured in the struggle for independence and therefore any settlement which falls short of this ultimate desire will not be supported by the leadership. Entering a negotiated settlement with Serbia is seen by the KLA as legitimising the autonomy-vice-independence argument and would not achieve its ultimate goal. It is therefore assessed that the KLA will continue to wage guerilla warfare against the JNA and try to provoke a severe response from the FRY security forces in an attempt to coerce NATO support. This would have the desired effects of both further weakening the JNA and advancing the KLA cause. Serbian security forces maintain that such guerilla tactics will be dealt with by their own forces which leaves NATO with a serious challenge to resolve. Does a response by Serbian security forces to a guerilla attack by the KLA constitute a break in the ceasefire and how does one corroborate the evidence?

A timetable for a negotiated settlement has yet to be finalised and it remains also within Serbia's interests to delay this process. Kosovo is viewed as the cradle of the Serbs and is at the heart of Greater Serbia. Historically, the Serbs have accused the Albanian population in the region of the systematic eradication of the resident Serbs, therefore any concessions granted to the Albanian population in Kosovo will be vehemently opposed. The agreement allows for autonomy talks which will grant the region the rights accorded to it by Tito, which were rescinded during the late 1980s by Milosevic. Any delay to this process will be perceived by Serbia as advantageous therefore such tactics can be expected during the autonomy negotiations. The IC will have to drive the negotiations and continually assess the progress being made, for both parties can glean advantage from delays. A timetable with identified aims must be produced and adhered to, for without visible progress being made, the Kosovars will lose confidence in the process. This in turn could lead to an increase in violence in an attempt to achieve the aim through conflict, or alternatively could result in the blackmail of the IC into granting Kosovo greater concessions in return for compliance.

NATO options

The success of the Belgrade Agreement is dependent upon a credible threat should non-compliance be evident, assuming that non-compliance can be quantified and verified. This worked well in initially securing the agreement; however, the prospect of maintaining this force for at least one year is problematic, not only in terms of force levels, but also political stamina. It is understood that President Milosevic will only respond to the

requirements of the agreement when the penalties for non-compliance are greater than the perceived political advantages. The current forces of NATO stationed in Italy and the Adriatic are considerable, but cannot be maintained indefinitely. Degradation in training and maintenance will begin to impact on these resources within months, however, any reduction in force levels could be perceived by Serbia as a sign of diminishing resolve on behalf of the international community (IC). This is the dilemma: What force strength and composition is required to maintain the pressure on Serbia to comply and is it politically acceptable and affordable?

The options available to NATO in support of the agreement are limited. In the unlikely, but most optimistic event, that compliance by both parties is achieved, both the OSCE verification mission and the NATO air verification regime could be withdrawn within a year. The most likely option, however, is partial compliance by the FRY and continued guerilla warfare by the KLA. In this scenario, the options for NATO are severely limited once the OSCE has deployed the 2,000 monitors, for any strike against Serbian security forces in Kosovo, or targets within Serbia itself, could result in reprisals. Sufficient Serbian forces remain in Kosovo to conduct reprisals against the OSCE and the KLA could also engage in these tactics whilst placing the blame on the Serbian forces. Even a limited air strike against Serbia could result in reprisals in Kosovo and subsequently embroil NATO forces in a ground war. This could occur as a result of an evacuation force sent in to the region to withdraw civilian personnel or to release OSCE personnel held hostage as a reprisal for such strikes. Although the OSCE is responsible for its own security within Kosovo and its monitors are deliberately unarmed to indicate impartiality, should the region become tense and the area non permissive, it is conceivable that a NATO reaction force stationed in neighbouring countries at high readiness, could be deployed in support of the evacuation of these personnel. Such a force would need to be air mobile at high readiness and stationed as close to the region as practicable. In addition, it would have to have sufficient assets to enforce own force protection and be intimately familiar with the OSCE evacuation plans. The significant numbers of OSCE monitors and other civilians involved coupled with their geographic displacement, makes the prospect of success in a non benign environment, questionable. Therefore, any offensive action undertaken by NATO without the fear of reprisals against those personnel working for IOs and NGOs in the region can only be achieved once those personnel have been withdrawn. Such a withdrawal will not only take considerable time and co ordination, but will not help the plight of those IDPs who depend upon the organisations for basic assistance. There is also nothing to prevent Serbia from dragging its heels in complying with the agreement and enticing NATO to request the withdrawal of the agencies' personnel working in Kosovo as a precursor to air strikes, only to find that a short time later Serbia is seen to be visibly complying and therefore testing the resolve of NATO to intervene militarily.

It appears therefore that NATO is limited in its options, despite overwhelming advantages in the ability to conduct offensive action. Intense diplomatic pressure must be maintained throughout the process; however, if Serbia decides to call the IC's bluff then the options are twofold. The first option entails punishing non-compliance with air strikes alone and the second is to follow up such action with ground troops deployed into the region to limit reprisals and enforce future compliance. Although the former limit non-compliance in the short term and send an unambiguous message to the parties, they severely hamper the ability of the agencies to do their work and make those people who depend on the IOs and NGOs the most, more vulnerable. Thus, they are of limited use and place additional burdens on those people who strive to improve the conditions for the many IDPs. The latter option requires significant troop levels deployed into Kosovo backed up with armour and artillery to enforce the Agreement and contain the parties' armed forces. This option poses a significant threat to NATO forces, for the prospect of NATO

troops deploying into Serbia's heartland is anathema to the Serbs and could fan the flames of hatred against NATO. Force protection remains paramount to any deployment and will require additional troops to carry out this function alone. It would also set a precedent for NATO by deploying troops into the sovereign state of another country which is neither a member of that organisation, nor legitimised by a specific Security Council Resolution for that action.

Conclusion

Neither military force, nor diplomacy can achieve compliance on their own; however, together they can form a credible partnership which achieves the desired end state. The degree of success is dependent on the solidarity of the IC to pursue an unambiguous and achievable policy towards Kosovo, which is backed up by a credible and powerful threat. It is imperative that the pressure is maintained on President Milosevic and the KLA to comply with the terms of the agreement and that a timetable for negotiations is devised and monitored. However, whereas prior to the agreement military intervention in the form of limited or phased air strikes were the main tools in applying pressure on Serbia, once the deployment of 2,000 OSCE personnel was announced, the problem of reprisals against civilian personnel needs to be considered. Any NATO threat to use force must be balanced against the threat to civilian personnel working in the region and withdrawal of those personnel prior to military action is both time consuming and problematic. The options for NATO are limited and becoming more restrictive as the agreement takes shape. Without visible progress in the region being achieved quickly, NATO runs the risk of being perceived as impotent in maintaining the pressure on Serbia to resolve the Kosovo crisis. Despite the problems, NATO is involved and must remain resolute in backing up the diplomatic efforts of the IC. Solidarity of purpose and credible forces are the only means by which the suffering will be alleviated and provide for lasting stability within the region.

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NGOs & PMCs – New Players on the Military Stage?

ARMED Forces in a democracy do not operate in a vacuum. They have long been restrained by chivalry, custom or other professional codes. Although pursuit of an annihilating victory might involve temporary disregard of aspects of law, conventions or institutions, returning the post conflict situation to a sustainable, peaceful end state requires a respect for law, international opinion and humanitarian values that cannot be engendered quickly, least of all by a victor who has recently been seen to flout those values. Although the prospect of British Armed Forces being involved in total war at present seems remote, they are now frequently involved in conflicts and operations where HMG's or allies' aims and objectives relate to a specific limited end state rather than outright victory. At the same time the means by which governments achieve that end state are less likely to be a predictable sequence of deterrence, diplomacy, coercion, ultimatum and invasion with civil and military playing distinct, separate roles. Increasingly, both governments and commanders will have to consider and balance a range of international, political, diplomatic, legal, moral, public, socio-economic, religious, cultural and environmental elements, not just in defining the desired end state but also in developing the plans and conducting the campaign to achieve that state. It is unlikely that politicians will be able to equip the commander at the start of the campaign with a full outfit of definitions covering all aspects of the end state, because, even when diplomacy has failed, the politician will continue to shape his battlefield, discovering what the market will bear in terms of political will, media reaction, public opinion, economic consequence, body counts and of course the consequences for world order after the end state has been achieved.

So what are the implications of this increasingly complex and symbiotic relationship between military and non military factors in the conduct of operations? The Cold War prism, through which operations could previously be viewed, allowed a more simplistic, doctrinaire approach because superpower attitudes were largely predictable and relatively unresponsive to minor perturbations around the globe. Inevitably this encouraged the military to concentrate on a narrow range of defence issues, – threat capability rather than intention; worst case, large-scale, multi-dimensional warfighting rather than regional and local peace support or humanitarian operations. Today, in a very different world, it is demonstrably not enough for the commanding officer, naval or joint commander just to be able to obey orders and to fight effectively, he has to be able to operate effectively across the spectrum of human relations from peace to war, in concert with his government's wishes and aspirations – assumed as well as articulated and with an eye to how his actions could be reflected by the media. In short, he needs good situational awareness in the widest sense and a fairly sophisticated knowledge of the consequences of his own actions on the world stage.

The Services have made good inroads into developing the necessary awareness and responsiveness; tight rules of engagement are the norm and media techniques training is available to those most likely to need it; Commanding Officers and others are introduced to the requirements of the Geneva Convention, international maritime law and a variety of environmental and safety legislation; national and NATO political and military structures are well understood; international relations form a key component of staff courses and more detailed political and intelligence briefings are generally made available to personnel entering a new theatre. Despite all this, gaps will remain in the situational awareness of any officer who does not make a conscious effort to continue educating and updating himself. University short courses are available to explore emerging trends in politics, religion and technology. Much timely regional information is available in journals such as *The Economist* or from the BBC World Service, which, when absorbed over a period, can provide useful

pol/mil insights. There remains, however, the significant area of Non-Governmental Organisation (NGO) activity on the fringes of government, particularly in the Third World or areas of known instability, where the naval officer pursuing full awareness is likely to find himself poorly placed. The operations of multi-national companies and their relations with client governments can be expected to be opaque for a variety of reasons, but the operations of churches, charities, aid organisations and agencies within a particular country can be expected to be open and should be understood by any military forces who expect to interoperate with them. NGOs in some cases provide the basic medical, health, educational, welfare and other infrastructure which a European would expect to be a government responsibility. Civic values may differ markedly: what appears in Africa as strong leadership, loyalty and family responsibility looks to the European remarkably like dictatorship, nepotism and corruption. Advisers abound in underdeveloped countries, enjoying relationships with the administration that would not bear Nolan committee scrutiny. Democratic control of the military may be rudimentary or non-existent. Where policing is underfunded and inept, or the judiciary corrupt and capricious, the community may find alternative informal security methods which command local respect and alongside which it may be prudent to work.

Assisting another country, whether in the form of peace or humanitarian support, is likely to demand pragmatic judgments rather than the unthinking imposition of Western standards. Difficulty may arise in accountability to sponsoring international organisations. For the military, operating under a United Nations Security Council Resolution is generally, but not necessarily, the unequivocal gold standard, but a simple mandate from HMG could be more problematic, because the UK relationship with international NGOs is probably not defined. Aid agencies, NGOs and charities have different charters, traditions and obligations to their donor bases that may inhibit what the military might see as reasonable flexibility. Aid workers, particularly expatriates, can be young, idealistic and naive, with limited understanding of political realities or the role of the military that may give rise to confusion or outright hostility.

Among the peripheral players, there are also the Private Military Companies (PMCs) who may provide anything from security at strategic installations such as mines and power stations, through provision of military advice and logistic support to a full warfighting capability. Although mercenaries tend not to enjoy a good press they represent, like prostitution and spying, an institution that has enjoyed varying degrees of official acknowledgement and tolerance for hundreds of years. In an era when mothers and governments are disinclined to sacrifice their youth for idealistic reasons, PMCs are likely to play an increasing role, not so much as private armies pursuing independent campaigns as in key supporting roles. The East India Company showed just how closely a PMC could be regulated by government and co-ordinated with regular military activity. From routine security to counter-insurgency, PMCs seem assured of a role in most operations other than war, when governments lack the necessary will or expertise. Regular forces will have to learn to co-exist: if not to work alongside, then at least to co-ordinate and deconflict their activities. Today's serviceman must be as prepared to cope with NGOs and PMCs as he is with the media or an enemy.

GUNRUNNER

Joint Training: A Ready-made Facility

IMAGINE, just imagine, in the era of ever-increasing emphasis on joint operations and deployable capability, a training arena in which ships could not only maintain their own core skills but also, by living and working alongside units of the other Services, actually gain live experience of joint operations – without casualties. Imagine, just imagine, a realistic environment in which joint procedures, joint tactics could be designed, evaluated, refined and validated – before they need to be implemented in a live operation. If such concepts seem too far-fetched, try this: just imagine having unfettered access to a land NGS range, with real bits of rock to shoot at, real crest-clearance problems, no fishing vessels to worry about, and range bookings/NOTAMs for as long as you require.

But it exists, today, and it is available to us for the asking. Sadly, few get the opportunity to exploit it, and sadly the potential value of this facility is thus not widely recognised. I am, of course, referring to the Falkland Islands.

The political situation in the South Atlantic has matured steadily over the last 16 years. It is recognised that the military threat to the Falklands is now virtually non-existent, indeed the current Argentine government is committed to use of peaceful means only to meet their objective of 'regaining' the Malvinas. But, at the same time, what was previously only a popular cultural ambition has now become a national commitment, written into the Argentine constitution. The Argentine administration misses no opportunity to press its claim, and the Malvinas issue remains a regular feature of internal politics. Meanwhile, UK remains keen to seek continued normalisation of relations, while honouring the promise to respect the wishes of the Falkland Islanders. And, with the latter unanimous in their wish for no change of status, UK remains committed to deterring and, if necessary, countering any threat to the sovereignty of the Dependent Territories.

This then forms the core of the mission of the British Forces Falkland Islands (BFFI): to demonstrate the commitment, ability and preparedness to counter any future aggression to the Falkland Islands. To achieve this, Commander British Forces (CBF) has a garrison comprising a mix of capabilities drawn from all three services, active throughout the islands but centred on Mount Pleasant. All units have to conduct a measure of theatre-specific training, there are regular theatre exercises and readiness is maintained to meet the potential threat of unalerted attack. But, in reality, 90%-plus of CBF's mission is met simply by having those forces in theatre.

What else do they do? Contrary to popular myth, there are the facilities to meet the training requirements of virtually all a ship's military skills – seamanship, navigation, air defence, gunnery, ASW, ASuW, strategic/tactical communications, aviation, and so on – it can all be done; one of the few constraints is the lack of link-capable units. With a little bit of initiative and enterprise, and without jeopardy to a balanced programme of activity, FCD 3 accomplishment and CAPES scores can be maintained at far higher levels than achievable in home waters. Similarly, while the reduced air wing limits the complexity of combat flying, F3 crews have access to virtually unrestricted low overland flying, which is becoming heavily constrained in the UK. The Hercules crews get to hone their pack-dropping and short-field operations skills, whilst they, and the F3s, can practise Air to Air Replenishment daily from the resident VC10. The Sea Kings get regular exposure to live Search and Rescue in adverse conditions, and heavy Chinook tasking keeps load/troop lifting skills at a peak. The Army's Resident Infantry Company (RIC) look upon their detachment to BFFI as a welcome break from Operational Tour Plot duties and a golden opportunity to refresh core skills, making full use of the terrain and range facilities.

However, of far greater significance is the collocation of the Service elements. The South Atlantic is completely unique in having front line combat elements of all three Services, working for a unified Command in a peacetime posture. Here, a ship may talk directly to the Rapier batteries and, on a day-

to-day basis, practise coordinated air defence against real aircraft. Here, one can discuss a sortie with an F3 crew, knowing that it will be the same crew that fly two days later, and that the same crew will be in the Mess on Friday for a face-to-face debrief. Here, a ship can dial up the frequency of the RIC platoon out on patrol in West Falkland. Here, unit commanders can table-top coordinated responses to scenarios, discover the real capabilities, constraints and limitations of their counterparts, even (deep breath) discuss interpretation and implementation of Rules of Engagement. Which is all great fun and hugely rewarding; it is also somewhat haphazard, largely the product of the initiative and enthusiasm of individual unit commanders.

But here is also where jointery can become reality at the front line and in peacetime: in the Falklands, jointery is not the preserve of policy statements, wiring diagrams and Joint Warfare Projects for SO2s and above – BFFI *live* jointery down to and including the Ordinary Rate. This is where all the words, concepts and emerging doctrine of UK's joint, deployable force aspirations can be tried, tested and proven, not just by the combat units themselves but also by the HQ BFFI staff. Indeed, the experience of living and working in the joint environment of BFFI provides a preparation second-to-none for appointments to PJHQ and other higher formations.

So it is all the more surprising that, rather than exploit the opportunity, the intention of all three Services seems to be to play down the Falkland Islands, pare away at force levels and, frankly, wish that the commitment would go away. Perhaps now is the time to stop looking at the South Atlantic as an unwelcome burden and start recognising it as a largely untapped gold mine; the time to stop looking at the Falklands as no more than a minor operational theatre facing a diminishing threat and start exploiting its potential as the joint training facility of the future, a facility that could so easily become the envy of the world; the time to stop treating inter-service cross-fertilisation as serendipity and start making it a core function of the theatre. Where better to implement a programme of joint tactical development? What better way to make jointery a reality and, at the same time, meet our political commitments and foreign policy objectives?

There is no need for any substantial increase in the garrison strength; the current levels are sufficient, just, sustainably to meet the 'presence/deterrence' mission. What I would propose is a serious, broad approach to joint training *in* theatre, rather than simply *for* theatre, perhaps under the direction of The Chief of Joint Operations and his post-SDR training command, with frequent detachments of additional force components for limited periods of dedicated joint force training, for example: ground attack aircraft, tactical communications (TCW), additional infantry, mobile Air Control Centre (IACC), maybe even the deployment of a small Joint Force HQ. How better to demonstrate and prove the deployability of our assets? Remember that the logistic train to the South Atlantic, including twice-weekly air-bridge and monthly sea-lift sailings, is already in place.

Conversely, it may be held that such exploitation, such training is a luxury we cannot afford. But if that is the case, is there not the risk of exposing our joint capability aspirations as a hollow dream that, similarly, we cannot afford?

JACOBUS FELIX

The Three Tier Commission – Is the Officer Corps Under Threat?

'ADMIRALTY Fleet Order 1/56 Revisited' (*NR* Jan. '98) touched on some reservations about the introduction of the Three Tier Commission (3TC). Specifically, the author concluded that it 'is likely to add to the problems of maintaining a viable officer structure', which is alarming as the whole reason for the Officers Study Group (OSG) work was to establish an officer corps system fit for the new Millennium. In this short article I would like to put some flesh on the bones of MEO's warning, and to propose a short term, painless solution.

On 1 April 1999 the Royal Navy will embrace a new structure for the Officer Corps – the 3TC. Widely acclaimed as a measure to suit the modern Navy, and to take the Officer Corps into the new Millennium, the 3TC is the result of a considerable amount of staffwork which has taken place since the Independent Review in 1995.

However, as with any new system, there is an inherent risk that the transition from concept to reality will expose flaws which were not apparent in the design stage. This risk is even greater when previous experience is discarded in the interests of allowing a 'clean start'. What is unacceptable is that, where flaws *are* exposed in the design stage, or before introduction into service, the Service fails to address the problem.

In the first stages of work, the OSG were invited to be as radical as they wished. There is no question that it is good to review, fundamentally, the well being of any system be it mechanical or manpower, and that the directive given to the OSG was right. Having said that, the current officer structure, implemented under AFO 1/56, has served us well for a considerable number of years. It is, therefore, reasonable to suppose that the safe way to proceed is to take the good aspects of an operating system, discard the bad, and build upon a solid foundation of experience.

One of the worst aspects of the old system was the recruitment of officers directly onto a Full Career Commission (FCC) where they were able to serve until the age of 50. The drawback of this was that if the officer was found to be difficult to employ in the latter stages of his/her career, then there was little the Service could do but suffer the encumbrance. It is a fact that there will be people who are unable to contribute beyond a certain stage, and the use of selective processes at various career stages is beneficial. The other major drawback was the 'segregation' of officers by list which led to the perception of a class system within the officer class.

The OSG proposals to eliminate these drawbacks, now announced in the 3TC DCI, are to abandon the General List concept entirely, creating a 'List Free' society, and recruit potential officers only on to a 12 year Initial Commission (IC). What 3TC fails to do is to acknowledge the benefits that accrue from having some officers recruited on to a longer commission, and the need for it.

Although there is a risk that the 3TC will herald unwelcome problems within small branches, and may destabilise larger branches as well, by far the greater worry is the fundamental risk that we will not be able to cope with the rate of loss of officers in the early career stages. Recent modelling of the 3TC officer structures showed that up to 90% of officers on an IC would be required to transfer onto Career Commission (CC) in order for the 3TC to work and, therefore, for the officer corps to survive.

In the years during which the OSG began their work, there was a poor economic climate, with reasonable recruiting prospects and low PVR. There has also been a constant downward pressure on Schemes of Complement leading to a fall in the overall Requirement for trained personnel of more than 20%. A by product of this situation was a strong incentive for officers to remain in the Service; applications to transfer to longer Commissions, and from Supplementary to General List were consistently high.

More recently, in the last two or three years, there has been a gradual reversal of these trends. Most worrying are: an increasing

number of young officers PVRing during the first few years after training; a reducing rate of applications to transfer to longer Commissions; and an increasing number of officers withdrawing their applications for longer Commissions.

To set this in context, despite a high application rate by officer recruits to join on a Medium Career Commission (MCC), we have recently been recruiting a very high percentage of officers as graduate entrants on to a Short Career Commission (to streamline current practice with the introduction of 3TC where all officers will join on an Initial Commission). Thus, the average age of officers in BRNC Dartmouth is now about 23.5, and the 'young officer' in his/her first appointment at sea is, typically, 26 or 27. Although the RN is not an 'ageist employer', it is, nevertheless, difficult to support a policy which places people in their first appointment at that age. Experience has shown that, whilst the high quality of junior officers is not in doubt, they do find the grind and lack of real responsibility in the early front line appointments demotivating. The consequence of this trend towards older junior officers is that the PVR rate is higher than we have been accustomed to. [Although not directly pertinent to this article, it must, surely, be better suited to the younger Naval College Entrant who could reasonably expect to be in the front line by the time he is 20.]

In the past, the reaction to higher loss rates was to increase recruiting and training. However, the modern Royal Navy is, increasingly, unable to surge the training throughput as the declining availability of sea training billets and first sea appointments acts as an effective bottleneck. The fact is that, if we are unable to train and retain enough junior officers during the formative stages of 3TC, it is unlikely that we will ever be able to recover from the shortages, and gapping and stretch will remain a permanent feature of the future. One of the worst disadvantages of gapping and resultant stretch is, of course, increased PVR. Thus, the manpower resources come under increasing pressure in a downward spiral which becomes more and more difficult to reverse.

Of course what has been illustrated is a theoretical worst case. But if the worst case scenario does occur, then the result is inevitable. Surely, in the face of all the evidence available now, it would be better to introduce a safety net which could be dismantled if, and when, the system has bedded down and been proved to work. At worst this would be an admission that the work conducted on the 3TC was slightly flawed; on the other hand, it is better to safeguard the future rather than to allow a suspected flaw to become fact.

The solution is simple and painless: reintroduce, with immediate effect, a quota for DNR to recruit officers directly onto a 16 year Career Commission. This will provide a buffer against high PVR and low uptake of IC to CC transfers under 3TC.

In conclusion, the Navy faces a significant manning challenge in the early stages of the introduction of 3TC. It would be prudent to face this challenge and deal with it before it comes to fruition, and it is strongly recommended that my recommendation to introduce a direct entry onto CC be taken up as a matter of urgency.

J. T. BETTERIDGE
COMMANDER, RN

The Mediterranean – World War Two and Current Relevance – II

Oil supplies

THE Mediterranean Campaign was significantly driven by the heavy demands for oil by both the Allies and the Axis, and this affected the priorities and strategy of both sides.

Britain acquired oil from the Middle East, largely via pipelines from Kirkuk in Iraq to Haifa in Palestine and to Syria. Assuming the safe arrival of oil at the Levant terminals, the British needed to transport it by sea to their military forces and to UK, another demand for the Mediterranean sea lines of communication to be kept open. For Britain, therefore, the protection of the Levant was essential.

It was a declared German long term objective, Hitler's Grand Strategy, to invade southwards from Russia through Turkey, and concurrently eastward along North Africa, to remove British forces and seize the Levant oil pipeline terminals. Germany encouraged a pro-German revolt in Iraq in April 1941, led by Rashad Ali, who threatened to drive out the British forces which were stationed in Iraq, by long standing agreement, to guard the oil terminal. In response, Britain sent aircraft and extra troops, and the situation was resolved by May 1941.

British oil supplies were further threatened when the Vichy French government supported the Iraqi insurgents by giving them arms, and allowed the Germans to use air base facilities in Syria, as a preliminary to a planned German occupation of Aleppo in northern Syria. To prevent this, the British launched a Syrian expedition between 8 June and 12 July 1941, defeating the French and securing the Syrian oil supply route.

Both these Iraqi and Syrian security problems highlighted the dependence of the British on oil delivered through the eastern Mediterranean.

The principal Axis source of oil was less obviously dependent upon the Mediterranean campaign, but was nevertheless so. The Rumanian oil fields at Ploesti, upon which Hitler's war machine relied, were close enough to the Mediterranean for them to be bombed by Allied aircraft if they were based in the Balkans or Turkey. Hitler, therefore, determined to deny air bases to the Allies; this required the deployment of German assets in south-eastern Europe. It was another instance of Hitler reluctantly involving himself in the Mediterranean theatre, which he felt was a distraction, but which was vital to his strategic needs.

The Italians, denied by the Royal Navy the use of the Mediterranean for any shipping trade, obtained most of their oil from the Germans: this will be discussed later.

During the critical land battles for North Africa in 1942 and 1943, the provision of oil by sea across and along the Mediterranean proved a decisive factor. Rommel's Afrika Korps, in particular, was prevented from consolidating its advances by a shortage of oil supplies.

The Mediterranean Campaign, then, was fought by Britain to secure her oil supply routes, by Germany to protect the Rumanian oilfields and to further Hitler's Grand Strategic aim of dominating all Middle Eastern oil resources, and by both the Allies and Axis to allow deliveries of oil for the conduct of their Campaigns.

Mineral resources

The German interest in the Balkan area was not limited to the protection of Rumanian oil supplies; they also needed access to certain vital minerals. On 19 May 1943, Hitler declared that if Italy were lost, it would be 'of decisive importance for us to hold the Balkans. Copper, bauxite, chrome and, above all, security, so that there is not a complete smash there if the Italian matter develops'[5]. Evidently, mineral reserves were a further factor driving the Mediterranean Campaign, attaching special importance to the Balkan area.

The Balkan position

As so often in history, the Balkans became a strategic pivot; the Balkan zone has been likened to a geological fault line, a permanent

weakness where troubles regularly erupt. The German oil line to Rumania and the British oil line to the Middle East passed so close together in south eastern Europe that a struggle for mastery was inevitable in the Balkan area. Not only did the Balkans allow access to oil and mineral reserves, but Churchill (and, incidentally, Hitler) foresaw the post war Russian interest in the area. Only the Americans remained unconvinced of the importance of the Balkans, suspecting Churchill of Balkans adventurism inappropriate to winning the War.[6]

Jugoslavia signed a non-aggression pact with Germany at Vienna on 25 March 1941, but a pro-British coup d'etat on 27 March forced Hitler to take military action. On 6 April, the Germans bombed Belgrade, and in a swift land campaign, overran the Jugoslav Army by 17 April. The Germans then continued into Greece, whilst in Jugoslavia, partisans under Tito became a headache for the Germans for the remainder of the War.

The campaigns in Greece and Crete had begun with the Italian initiative to invade Greece, starting on 28 October 1940. In response, the British landed in Crete, adopting Suda Bay as a naval base, and began sustained air attacks on the Italians. Greek and British armies then fought a land campaign which forced the Italians back out of Greece. Threatened with the loss of the Balkans by the Axis, the Germans were forced to enter the fray. In November 1940, Hitler ordered the German Army to prepare a plan to invade Greece, to enable the Luftwaffe to prevent any British attempts to bomb German oil supplies in Rumania. After German intervention in spring 1941, the British were driven from Greece by the end of April 1941, and from Crete by the end of May.

Rumania joined the Axis on 26 November 1940, and Bulgaria signed the Vienna Pact on 1 March 1941. Both these countries thereby gave Hitler freedom of manoeuvre in the Balkans.

Control of the Aegean became vital for Britain, largely to prevent the Luftwaffe from being in a position to attack the Suez Canal. The British planned Operation Mandibles, to seize the Italian held Dodecanese Islands; this Operation failed in February 1941, and was discussed again, though not reattempted, later in the War; the Dodecanese remained a strategic concern. The Aegean, moreover, was the supply route to allied Russia, and it was adjacent to neutral Turkey.

Historically, Turkey has always been considered a strategic prime mover, or at least a force for instability; such was the case in the Second World War, when Turkish tender neutrality became a source of concern for both Allies and Axis.

Turkey had fought on the German side in the First World War, and in the Second World War, Germany generally benefited from Turkish neutrality. The Montreux Convention, for example, favoured Germany by allowing unimpeded use of the neutral Bosphorus and Dardanelles, control of which by the Allies would allow the interdiction of German supplies from the Danube and Rumania to their forces in Greece. If Turkey joined Germany and Italy, this would allow Axis dominance of the eastern Mediterranean, and the prevention of Allied operations against German held Balkan areas. The Allies, therefore, saw advantages in persuading Turkey to enter the War on their side, and at the Casablanca Conference of January 1943, they declared their aim to enlist Turkey as an ally. For the Allies, Turkish air bases would enable the bombing of German forces and facilities in Greece, Rumania and Bulgaria.

Hitler considered dominance of the Balkan countries as essential, for access to his oil and mineral supplies and because he recognised that flanks are always militarily important. The Balkans constituted the critical southern flank of Hitler's eastern front against Russia.

The effect of Russia

Hitler coveted Russia's oil and wheat fields, and his unsuccessful invasion of Russia in 1941 was part of his wider Grand Strategy of a pincer movement to grip all reserves of Middle Eastern oil. The German Operation Barbarossa, in Russia, had three subsidiary links with the Mediterranean Campaign. Firstly, the battles for Greece and Crete delayed the German attack on Russia. Secondly, Hitler's Russian invasion, once it

started, took forces away from the Mediterranean. Thirdly, the Mediterranean Campaign was subsequently used by the Allies to ease pressure on Russia.

The battles for Greece and Crete lasted for 56 days. Whilst a disaster for the British, these campaigns had the effect of tying up Hitler's forces, which contributed to delaying his attack on Russia by five weeks, from his originally intended date for invading Russia, 15 May 1941, to the eventual attack on 22 June. This delay subsequently allowed less time for the German armies to complete the Russian invasion before the harsh winter set upon them. It is possible that Moscow might have fallen if the German invasion had been launched earlier.

For Hitler, the Russian front and operations in the Mediterranean theatre were opposing demands on his assets. In Hitler's eyes, Russia was the primary goal, and the Mediterranean was a distraction, which diverted forces from the Russian campaign. In fact, history perhaps suggests that the Russian front was the distraction; it was a military mistake which prevented sufficient German forces being dedicated to the Mediterranean Campaign.

Stalin demanded that the western Allies should assist their Russian ally by diverting Hitler's forces from the eastern front by applying pressure elsewhere; to achieve this, the Allies developed their Mediterranean strategy. Russia became yet another reason why the Mediterranean Campaign was an essential ingredient of the War. By making the Mediterranean, in some respects, a distracting side show for Hitler, the Allies accorded the theatre a key part in their own strategy.

The American approach

The Americans took some persuading that the Mediterranean was worth military investment, for they did not see the theatre having any relevance to defeating either Germany or Japan.

After USA entered the war in December 1941, President Roosevelt decided, following considerable argument amongst the US military leaders, that the European war would take initial precedence over the Pacific war. This Europe First policy continued to be a tender one, requiring subtle political handling by Roosevelt and understanding by Churchill. There was always the danger that USA might shift emphasis to the Pacific Campaign. To many Americans, Mediterranean undertakings smacked of British imperialism and did not seem directly appropriate to winning the War in Europe. As US Admiral Leahy wrote later, 'our persistent British friends strove mightily to create diversions in the Mediterranean area'.[7]

There was impatience by the US public for some rapid successes against Germany. As a politician, anxious to please his voters, Roosevelt, supported by his military advisers, began to apply pressure on the British to develop joint plans for a prompt invasion of Europe across the English Channel. In particular, Henry Stimson, the Secretary of War, and General Marshall, US Army Chief of Staff, argued vigorously for a Front against Germany in Western Europe in 1942, advocating a massive concentration of force against the enemy's main armies in central Europe. They opposed the British proposal for what the Americans saw as a back door approach through the Mediterranean, pointing out, in favour of a cross channel European invasion, that UK had good base facilities, the British Isles needed defending anyway, the sea lines of communication to the Mediterranean were long, and finally that Germany was protected from southern Europe by some natural obstacles, notably the Alps. Ironically, Marshall's Clausewitzian, continental strategic view was closer to Hitler's than to the British maritime attitude.

The Americans felt that the British were unduly casualty shy in their rejection of the US preference for an 'early and massive' attack directly into north-western Europe. It has been suggested that the Americans, with no current war experience in 1941, underestimated the professionalism of the German soldiers. Moreover, the Americans were not willing to accept that 'early and massive' were mutually exclusive, for it would have taken many months to amass sufficient forces in UK for the invasion.[8] Eventually, the Americans were persuaded by Churchill and Field Marshal Alanbrooke that

an invasion of France was impossible in 1942, but that operations in the Mediterranean could be undertaken forthwith and would satisfy American public demands for positive military action.

Writing at the Trident Conference, in Washington in May 1943, when plans to invade Italy were being discussed, Field Marshal Alanbrooke summed up the American view of their involvement in the Mediterranean. 'The Americans are taking up the attitude that we led them down the garden path by taking them to North Africa. That at Casablanca we again misled them by inducing them to attack Sicily. And now they do not intend to be led astray again.'[9] The fact that the Americans subsequently allowed themselves to become committed to the invasion of Italy reveals the strength of British influence over the US in the Mediterranean, combined with the compelling importance of the Mediterranean Campaign.

The significance of Operation Torch

The US introduction to the Mediterranean theatre was by Operation Torch. To assist the British, US tanks and aircraft were sent to North Africa in mid-1942. On 30 July an Anglo-American decision was taken to invade French North Africa with the aim of securing the western Mediterranean sea route to allow the subsequent attack on Germany through Sicily and Italy.

Operation Torch, the co-ordinated landing by US forces at Casablanca and British troops at Oran and Algiers, took place in November 1942. In response, belatedly appreciating the strategic importance of the central Mediterranean, the Germans reinforced Tunisia. The ensuing land campaign was hard fought, but on 12 May 1943, German/Italian forces surrendered, with 248,000 prisoners, and the Axis was ejected from North Africa permanently.

The North African total victory for the Allies, resulting from Operation Torch, had great strategic importance. The threats to Suez, the Levant and Russia's southern flank were removed. Massive German forces had been tied up in Tunisia, easing pressure on Russia. Italy was demoralised and almost ready to quit the War; this would later require German forces to defend the Italian mainland. Finally, Resistance movements all over Europe were encouraged.

Operation Torch took advantage of the fact that the Germans had failed to take the Mediterranean seriously enough, until it was too late. If Hitler had followed up his original plans to take Gibraltar and Malta, and devoted sufficient resources earlier to North Africa, the course of the whole War might have been altered. As it was, the Allied Mediterranean strategy worked. Operation Torch illustrated the Allied conviction that the best way to attack Hitler in 1942 was through the Mediterranean; it was not a diversion, but was a decisive strategy, drawing US forces into the Mediterranean area, and laying the foundations for the Allied invasion of Italy and ultimately the remainder of Axis Europe.

Italy's bearing on the War

Italy's geographical position dictated that all Mediterranean operations were relevant to her.

In the early part of the War, during 1940, Germany left Italy to proceed independently with hostilities in the southern area. In Africa, by August 1940, Italy had overrun British Kenya and Somaliland. By September of the same year, the Italian 10th Army had expanded eastward from Libya, through Cyrenaica and had reached Sidi Barrani, in Egypt. However, once British reinforcements had been delivered by sea, without Italian naval interference, the Italians could not hold their positions. On 9 December 1940, British and Indian forces under Lieutenant General O'Connor attacked the Italians in Egypt and in three days defeated three enemy army corps, taking 38,000 prisoners (including four generals), 73 tanks and 237 guns. In another four days, O'Connor drove the Italians back into Libya, and took a further 40,000 prisoners, 400 guns and 128 tanks. Similarly, Italian Somaliland fell to the British in March 1941, and Ethiopia and Eritrea in April. By early 1941, the Italians had been entirely removed from east Africa, and only held Libya in the north; in short, they were losing the land campaign fast.

At sea, the Italian Navy was statistically strong, matching the Royal Navy's Mediterranean Fleet in capital ships, although having no aircraft carriers, and vastly outnumbering the British in destroyers and submarines. However, the Italians lacked sound naval direction from the top. Mussolini was not conversant with the use of navies, and his naval leaders were unwilling to commit their major forces against the perceived invincibility of the Royal Navy, preferring instead to adopt a 'fleet in being' strategy, which failed. Moreover, the Italian Air Force repeatedly neglected to provide air support to the Navy, largely because of inter-service rivalry. As a result, Admiral Cunningham's fleet won such battles as Taranto, the first great naval air attack, on 11 November 1940, and Matapan on 28-29 March 1941, when Italian capital ships ventured to sea and were beaten in a day and night action, revealing Italian technical and tactical inferiority. Such battles quickly reduced the Italians' will to fight at sea, and increased their reluctance to deploy major naval units away from Italy. There was, for example, negligible Italian naval effort against the vulnerable British in the withdrawal from Greece and Crete. On many occasions during the War, Italian junior naval personnel demonstrated some notable courage, and the British suffered losses to Italian 'assault machines' and mines. Overall, however, the inability of the Italian naval commanders to obtain any mastery of the Mediterranean Sea had a significant effect on the course of the War.

Mussolini's pride and ego led him to involve Italy in military adventures which she was ill equipped to perform. For example, in addition to his north and east African operations, in October 1940 Mussolini undertook his ill fated invasion of Greece, without advising Germany, to demonstrate that he could take his own military initiatives.

By early 1941, Italy had become the weak link in the Axis, and Italian military and naval failures were an embarrassment for Hitler. Moreover, since the Italians were unable to control the Mediterranean, they depended on German fuel resources from eastern Europe, and the Germans were progressively less willing to release precious oil to an ally which was not pulling its weight militarily. This became a vicious circle, for with shortages of fuel, the Italian Navy was less able to resist the Royal Navy, resulting in still lower Italian influence in the Mediterranean. Ultimately, Germany was forced to come to the aid of her ailing ally; this caused direct German military involvement in the Mediterranean area.

From the Allied point of view, Italy was an Axis power which, therefore, had to be taken out of the War, sooner or later. The Italian weakness offered the Allies an excellent opportunity to engage the Germans and turn the Mediterranean into a massive liability for Hitler. In addition, the Allies saw that the defeat of Italy could influence the attitudes of the Vichy French authorities in Syria, Lebanon and French North Africa, the neutrality of General Franco in Spain, and the confidence of the Balkan states in Allied power.

It took the Allies 20 months to conquer Italy, but the campaign not only removed Italy from the War, but also tied up 26 German divisions and provided airfields for the Allies to bomb the Germans in the Balkans, central Europe and southern France. The Italian aspect of the Mediterranean Campaign was thus the key component of Allied strategy against Germany during 1942 and 1943.

Spanish considerations

Occupying the western end of the Mediterranean, with significant North African interests, Spain was strategically important to the Mediterranean Campaign. Britain was particularly concerned for the security of Gibraltar, which controlled the western entrance to the Mediterranean and was vulnerable to Spain; Hitler recognised this.

The Spanish dictator, General Franco, hedged his bets concerning the outcome of the War,' he wanted to see who started winning, before committing Spain to either side. He realised that the Allies, with their maritime power, could interrupt Spain's essential supplies, especially those of wheat and oil. Nevertheless, overall, Spanish neutrality leaned slightly towards the Axis and was susceptible to wooing by Hitler, who had

supported Franco during the Spanish Civil War.

Such was the strategic importance of the western Mediterranean, that the British, Italians and Germans made continual diplomatic overtures to Franco throughout 1940. For example, the British Foreign Office issued a statement assuring the Spanish of economic support if they remained independent from the Axis. Hitler, intending to lure Spain on to the Axis side, met Franco in October 1940, but failed to reach any agreement. It became clear that Spain would not willingly enter the War. The Spanish Ambassador to London told Mr Eden, the Foreign Secretary, on 8 May 1941, that as long as the British held Suez, Franco would not join Hitler, on the basis that holding one end of the Mediterranean theatre was useless without the other end.

In his Directive No.18, issued on 12 November 1940, Hitler laid out his plans for Operation Felix, German intervention in the Iberian peninsula. In essence, the aim was to involve Spain in the War, with German military assistance, leading to the removal of the English (sic) from the western Mediterranean.

Operation Felix was never carried out, Spain did not enter the War, and Gibraltar remained British; this was one of Hitler's significant mistakes, for he failed to close the western Mediterranean to the British, thereby allowing the Allies to prosecute the Mediterranean Campaign which ultimately led to the defeat of the Axis.

Deductions

May the Mediterranean Campaign be considered a side show? Given the factors which have been discussed, the Mediterranean theatre undoubtedly demanded the attentions of the Axis and the Allies. If the Axis had attained control of the Mediterranean early in the War, Italy could have linked with her possessions in Africa, enabling Axis commerce raiders to operate in the Indian Ocean. In turn, Britain's weakness at Singapore would have allowed the Japanese to link up with Axis forces in the East, probably drawing Japan into the War much earlier. If Hitler had successfully concluded his Grand Strategy, his seizure of the whole Mediterranean area would have given the Axis exclusive control of Middle Eastern oil. In addition, Axis maritime freedom in the eastern Mediterranean would have allowed them to support their Russian Campaign, whilst preventing Allied support of Russia via the Black Sea.

British, and later Allied, dominance of the Mediterranean prevented the above worldwide consequences from becoming a reality. Britain recognised that this was no side show. So did Hitler, but, as has been discussed, he failed to give priority to the Mediterranean, intending it to follow the invasion of Russia in his Grand Strategic Plan.

What may be deduced concerning the strategies adopted in the Mediterranean Campaign? As Sun Tzu taught, 'distract and divert your enemy', 'do not attack until certain of winning', 'avoid attrition', 'break up enemy alliances', and 'strike your enemy where he is weak; bypass what he defends'. The Allied Mediterranean strategy incorporated these ideas. By distracting Germany in the Mediterranean, pressure was eased on Russia Attrition was avoided, since the Allies could not be certain of winning in central Europe in the first half of the War. By engaging the soft underbelly of Europe, the Axis alliance was damaged by Italy becoming a liability for Germany. Finally, it was recognised that to attack the Axis through the southern flank was to bypass Germany's strength in northern central Europe and to strike her weakness in the south.

The Mediterranean Campaign may be seen as a triumph of the British 'blue water' school of thought over the American (and German!) continental, direct, massive army confrontation approach. The British preferred to campaign on the flanks, avoiding the enemy's main forces; Liddell Hart has described this as 'the British way in warfare'. Moreover, to paraphrase Field Marshal Montgomery, 'a nation which is confined to a purely land strategy will in the end be defeated'. The Mediterranean Campaign of World War Two was an illustration of a maritime strategy proving decisive against a

continental enemy.

It has been said that war is four fifths geography, and there is no better example of this than the Mediterranean, which is a geographical peculiarity: a large maritime theatre, surrounded by great land masses, with vital strategic interests and lines of communication across it.

Were operations in the Mediterranean a distraction, and if so, from what? All war strategies demand compromises – there are rarely sufficient forces available for all military objectives to be fully pursued simultaneously, so choices have to be made and force levels adjusted to fit priorities. Some degree of distraction from each objective is, therefore, inevitable.

For Hitler, the Mediterranean Campaign remained a low priority – a distraction from his primary target of Russia – until he began losing the War from the south. Then the Mediterranean ceased to be a distraction, and became fundamental to the survival of the Axis.

For Britain, the Mediterranean was never a distraction, but it was certainly a competing demand on limited war resources. In particular, the Mediterranean Campaign took forces away from the UK home base, the North Atlantic supply routes, India and the Far East, all of which were crucial concerns. For the USA, involvement in the Mediterranean appeared to be a distraction from direct efforts to defeat Germany and Japan, until the US leadership recognised that the Mediterranean Campaign offered the way to crush the Axis in Europe.

So what?

So, the Mediterranean was vital in what might be termed the defining and shaping phases of the Second World War. During the Cold War, perhaps it constituted a flank, politically and geographically. In the modern era, as emphasised by Javier Solana, many contemporary issues find their cross-roads in the Mediterranean theatre. In the future international environment, we take our eyes off the Mediterranean at our peril.

(concluded)

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Exploding Myths: Battle-Cruisers

THE first battle-cruiser, HMS *Indomitable*, sailed out of the Elswick Armstrong works on the morning of 25 June 1908. No-one knew just how influential this class of ship would prove to be, as the battle-cruiser would dominate the tactical thinking of the early 20th century. Two years before *Indomitable*'s launch, the battleship *Dreadnought* had caused a sensation among the world's navies; however, the battle-cruiser's design was even more radical, combining the *Dreadnought*'s armament with that of a cruiser's superior speed. In the years that followed, this new, radical design proved to be not only influential, but also incredibly controversial. It is interesting to note the responses of contemporary naval officers when asked about these types of vessels. The battle-cruiser is often seen as a failure, the class that failed the Royal Navy; however, this is the myth that surrounds the battle-cruiser. The general consensus believing them to be Lord Fisher's greatest folly is one of traditional assumption and not actual fact. In looking at the battle of Jutland, the facts surrounding the battle-cruiser in combat show a much more varied picture, other than the simplistic claim that their destruction lost Great Britain the tactical victory. In World War II, there is much of the same reasoning evident when describing HMS *Hood*'s destruction; however, once again the evidence paints a much larger picture surrounding cause of the fatal explosion. These studies bear a real resemblance to the contemporary Navy, demonstrating that mistakes are often made, and it is for this reason that it is important to understand the true fate of the battle-cruiser.

During the battle of Jutland, 31 May 1916, the Royal Navy lost the battle-cruisers *Invincible*, *Indefatigable* and *Queen Mary* with the loss of over 2,600 men. It was these losses which allowed the German Fleet to claim their moral victory. The battle-cruisers' performance in the battle has been the cause of great debate. The Commander of the First battle-cruiser Squadron in 1916 was Vice-Admiral Sir David Beatty:

> In the afternoon Beatty came into the *Lion*'s chart-house. Tired and depressed, he sat down on the settee, and settling himself into a corner he closed his eyes. Unable to hide his disappointment at the result of the battle, he repeated in a weary voice, 'There is something wrong with our ships', and then opening his eyes and looking at the writer, he added, 'And something wrong with our system.'[1]

Beatty recognised two failings of the Royal Navy at Jutland. It is the first of these failings which is most often remembered, that of the failure of our ships. It would seem that the battle-cruiser was at fault, the class had failed the test of battle. Beatty's comment of 'there is something wrong with our ships,' was due to the inability of his ships to destroy a smaller force of German battle-cruisers, and lose two in trying. If the question was asked, had German battle-cruisers been effective in battle, the answer would have been very different. The German ships had seemed perfect, being fast, powerful enough to sink three battle-cruisers and strong enough to survive the combined armament of the Grand Fleet. It could be said that the German battle-cruisers had saved the High Seas Fleet from destruction at the hands of the Royal Navy when the Grand Fleet crossed Scheer's 'T'[2] for a second time at 19:10 on the 31st.[3] Scheer had given his battle-cruisers the historic signal for them to charge the Grand Fleet, *'Schlachtkreuzer ran an den feind. Voll einsetzen!'* (battle-cruisers, at the enemy. Give it everything!) The vessels survived the charge, although seriously mauled – leading to an interesting contradiction – the German battle-cruisers had been a success, whereas it seemed the British ships were not. The fundamental difference between the two countries' battle-cruisers is one of tactical doctrine. The Director of Naval Construction (DNC) stated to the Admiralty on the 7th October 1916,[4] 'The fundamental maxim of British warship design has been that the best defence is superior power of offence.' However, German doctrine was completely opposite, favouring defence over offence. This difference in design is clearly apparent when British and German battle-cruisers are compared. *Lützow* and *Queen Mary* are

comparable ships, both having fought at Jutland and being of a comparatively similar size of 26,180 tons for *Lützow*[5] and 26,770 for the *Queen Mary*.[6] There is a striking difference in the offensive power of the two ships, the *Queen Mary* mounting 8-13.5 inch guns compared with *Lützow*'s smaller 12 inch mountings. However, in defensive terms, *Lützow*'s extensive 12 inch belt armour completely outclasses the small area of 9 inch belt protecting the *Queen Mary*'s engines, boilers and magazines. The myth of the battle-cruiser is that this lighter armour led to their destruction; however this is not the case. Battle-cruiser armour was proved to be adequate for the time and deck armour, which was seen to be the biggest culprit, was capable of protecting the ships at the ranges the battle of Jutland was fought over. The reason for the armour myth stems from British high command at the time, most notably, Admirals Jellicoe and Beatty:

> The facts which contributed to the British losses were, *first*, the indifferent armour protection of our battle-cruisers, particularly as regard to turret armour and deck plating and, *second*, the disadvantage under which our vessels laboured in regard to light. Of this there can be no question.
>
> *Admiral Jellicoe*[7]

Admiral Jellicoe clearly places all blame for the results of the battle on technology. However, in the analysis of the damage after the battle, it was found that only in one instance did *part* of a shell penetrate to the vitals of the ship.[8] (In *Tiger*, part of a shell penetrated her engine room doing no damage.) It was also found that no whole German shell penetrated the vitals of a British ship through her deck and that although the armour plate on British ships was usually slightly thinner than their German counterparts, inch for inch it was more effective. The maximum range at which British 9 inch armour was penetrated was at 14,600 yards in *Lion*, whereas British 12 inch shell were penetrating German 11 inch armour at ranges of 17,500 yards, as seen in *Moltke*.[9] The quality of British armour could not be in doubt. However, while Beatty was wrong to say there was something wrong with British ships, he was unfortunately correct in regard to our system. This is the second failure which Beatty draws attention to, however, it is this failing which is so often overlooked, or simply ignored:

> One has always wondered why we were so slow to appreciate the danger inherent in the unrestricted use of bare charges; there were several pointers before Jutland: *Good Hope* at Coronel, *Kent* at Falklands, where cordite fire nearly spelt disaster. *Bulwark* at Sheerness, and no doubt others which I have forgotten. Maybe we were too complacent, and of course criticising High Authority in those days was a much more dangerous pastime than it is today.[10]

The Royal Navy's Gunnery Experimental Officer in the 1930s, Commander R. T. Young, recognised that Great Britain had a number of failings in its cordite handling procedures. It is not a design fault specific to the battle-cruisers to which the disasters can be attributed, but to magazine procedures, flash tightness and the reckless pursuit of increased rapidity of fire. It is the human element within the ships' technology which is at fault; but for this weakness, it is doubtful the Royal Navy would have lost any capital ship at Jutland. The failings of the whole procedure started with the charge itself. The cordite charges consisted of a silk bag with bare gunpowder igniters stitched to both ends to facilitate fast loading. This meant that any flash in the turret or barbette would detonate any exposed charges causing a chain reaction to the exposed magazine, leading to the destruction of the ship. In contrast, the Germans kept all charges covered until required and only one charge had an igniter and this charge was kept and loaded in a brass case. British operating procedures in the handling room were also particularly suspect, with the magazine door remaining open at all times and charges being stacked in the handling room in an effort to reduce loading time. An example of this action can be seen in an account from Able Seaman Gunner G. F. Bowen:

> I arrived down in 'A' magazine within a few seconds of the Action bugle, and

> we loaded the hopper and got about five rounds in the handling room. Then there was a lull, during which we stripped off our flannels. opened up plenty of cases and waited.[11]

It is interesting to note that *Lion* survived a hit on Q turret, which under the circumstances of the time, would probably have detonated the magazine. This was due to the initiative of the Chief Gunner, Alexander Grant, who had brought into effect a strict routine whereby only a limited number of charges were allowed outside the magazine, which was to remain closed.[12] It should also be noted that the turret officers of *Lion* fiercely opposed Grant due to their belief that this would slow down loading times![13] The final failing in the loading procedure was in the anti-flash fittings. Although fitted, they were woefully inadequate at stopping a cordite flash as had been seen in the battle-cruisers. An example of this can be seen in *Invincible*'s final moments when at 18:33 a heavy shell, from *Lützow*, struck the roof of Q turret, detonating inside it and blowing the roof over the port side. The explosion detonated the charges in the turret and flashed down the main hoist to the magazines, which also detonated breaking *Invincible*'s back.[14]

The gunnery factor

The major factor in British ship design was that we should carry larger calibre guns than any potential enemy. This was clearly demonstrated in the earlier dreadnought race where the German Navy adopted 11 inch guns, whereas the British used the 12 inch gun. This pattern was to continue throughout the naval arms race. In 1908, the Germans adopted the 12 inch gun for the 'Helgoland' Class; the British reaction was to revert to the old 13.5 inch calibre for its future battleships.[15] However, by 1912, there was growing unease about other nations' gun calibres with rumours of Germany planning an increase and the Japanese and Americans adopting the 14 inch gun. This left Britain in the unfavourable position of losing her superiority in hitting power. The 1912 Programme therefore saw the adoption of the 15 inch gun in the shape of the 'Queen Elizabeth' class battleships. Therefore at the Battle of Jutland, both the British and Germans used a number of differing gun calibres, but it was Great Britain who clearly held the advantage. The two battle-cruiser fleets consisted of the following ships. In the First battle-cruiser Squadron, *Lion, Princess Royal, Queen Mary* and *Tiger* all had 8-13.5 inch guns.[16] *New Zealand* and *Indefatigable* both mounted eight of the older 12 inch guns. In comparison the German ships of the First Scouting Group had a much lighter armament with the two newest ships, *Derflinger* and *Lutzow* mounting 8-12 inch guns and the older ships *Seydlitz* and *Moltke* mounting 10-11 inch guns. The last ship in the line was the *Von Der Tann* which had the light armament of only 8-11 inch guns, giving it the lightest armament of any of the battle-cruisers. However, Beatty was also supported by the 5th Battle Squadron, consisting of the 'Queen Elizabeth' class fast battleships, *Warspite, Valiant, Barham* and *Malaya* which were armed with 8-15 inch guns – arguably the most powerful squadron in either of the two navies.

So, if Great Britain's defence was superior power of offence, it would indeed seem strange for the battle-cruisers' larger guns to be incapable of sinking the German battle-cruisers. The answer was that the Royal Navy was denied its offensive dominance due, once again, to the external sources of procurement and doctrine, and not to poor design. The failures manifested themselves in two distinct ways. The first was the choice of fire control system for the Royal Navy. The concept originated with civilian journalist and part time inventor, Arthur Pollen, who came up with the means of controlling long range gunnery. The system he adopted was an automatic plotter to chart the movement of the firing and target ship and a clock, or computer, to calculate the elevation and bearing for the guns. These measures were necessary due to the great rates of change involved in naval war. At long ranges, flight times could be over a minute, meaning the target ship would be well away from the point of aim when the shells hit. This necessitated the use of some means of calculating where the target ship would be after the flight time had elapsed.

Pollen made his proposals for a fire control system in 1906; however, trials were still underway in 1912 on HMS *Orion*. Pollen also had competition in the shape of Frederic Dreyer, a naval officer and associate of both Lord Fisher and Admiral Jellicoe. Dreyer's system was based on Pollen's original design, but greatly simplified with manual instead of automatic plotting. After many trials it was Dreyer's much flawed system that was chosen by the Admiralty. Pollen's system was rejected after years of unfair trials, misunderstanding, and downright skulduggery. In 1912 Dreyer, even though he was Pollen's main competitor, wrote a memorandum on Pollen's Argo clock claiming, 'The Argo Clock as a piece of ingenious mechanism is no doubt very attractive but it is not a practical instrument.' Dreyer then claimed that Pollen's instruments were plagiarised versions of his own methods.[17] This memorandum, although technically and morally incorrect, would appear to have influenced the judgment of the Admiralty in Dreyer's own favour.[18] The only 'fact' surrounding the choice of fire control system was that no-one could understand why Dreyer's system had been chosen over Pollen's. An American officer who had been attached to the Grand Fleet was highly sceptical of the value of Dreyer's system:

> We have reason to think that, in the majority of ships always, and in most cases, in all ships, the Dreyer system of instruments is not, in fact, employed in action. We heard no satisfactory explanation why this system, and not the Pollen System, is employed. In theory, the Pollen System is not only more scientific, but simpler. It seems capable, that is, of a high degree of accuracy which the Dreyer system can, seemingly, never attain.[19]

Nevertheless, five sets of Pollen's clock had made it into the fleet for trials on the ships *King George V, Ajax, Centurion, Orion* and *Queen Mary*.[20] It is remarkable how much faith there was in Pollen's system within the Royal Navy, even though the Dreyer and Vickers systems had been chosen above it. Ships with the Argo clock were known to have the most accurate gunnery in the fleet. For example, the *Queen Mary* was seen as the crack gunnery ship of the battle-cruiser fleet and her shooting at Jutland had been the best of the British battle-cruisers right up to the point when she exploded. The British battle-cruiser hit the *Seydlitz* four times in the run to the south. The first hit was obtained in the opening minutes of the battle at 15:55 and caused extensive damage to the battery and the main decks just forward of the main mast. Two minutes later she hit again, this time astern, with the shell hitting the barbette of the super-firing turret, detonating and causing a fire in the working chamber of the gun and in the trunking.[21] The German ship survived the fire in her barbette, unlike her British counterparts. The other British battle-cruisers' gunnery had not been as good; both *Lion* and *Princess Royal* had only managed to obtain two hits each, the Germans had been fortunate in removing the *Queen Mary*. Admiral Jellicoe also understood the advantage of the Argo clock over the majority of the systems fitted to the rest of the fleet. The van (lead unit) of the fleet consisted of the Second Battle Squadron. In this important and dangerous position, Jellicoe put his most capable ships, and it is no wonder that among its two divisions it contained all the Argo equipped ships. So once again the Admiralty had failed its ships and men. It was the Grand Fleet's belief that Pollen's Argo clock and plotter were the best answer to the long range gunnery question and battle had proved it; however, due to cost cutting and unfounded loyalties, the Dreyer system had been chosen. Jellicoe, and more importantly Beatty's offensive power had been seriously curtailed.

By the end of the battle the German First Scouting Group had received a severe mauling at the hands of the Grand Fleet. Only one ship, the *Moltke*, was in a fit state to fight at the end of the day. Of the other ships, none were capable of continuing the action with only five fully operational turrets remaining between them. *Seydlitz*, when she finally got back into port had 5,329 tons[22] of water on board and *Derfflinger*, who had been hit by 21 heavy shell, had 3,350 tons.[23] But even with all this damage, only the *Lützow* eventually sank. The survival of the First Scouting Group is often

attributed to their superior armour, internal sub-division and damage control; however, as previously stated, German armour was not superior to the British, although it was thicker. German sub-division was certainly outstanding and the fact that the *Seydlitz* made it into harbour at all was down to a work of salvaging genius, but there is a far more sinister reason for the German ships' refusal to sink. The German success was in fact not down to a German virtue, but actually a British vice. The standard British armour piercing shells in 1916 were filled with an explosive called Lyddite and it was widely thought of in the Royal Navy as the best shell in the world; however, this reputation was not only unfounded but also unwarranted. The failings of the shell were well known, even back in 1910 when Jellicoe was Controller of the Ordnance Board. A number of defects were found with the shell during the gunnery trials in the pre-dreadnought *Edinburgh* in 1909-1910. The first of these defects was that when the trajectories were curved, to make the impact of the shell oblique rather than perpendicular, the projectile was incapable of penetrating the armour plate. Therefore the shell would only be effective at very short or very long ranges when the trajectory of the shell would give a perpendicular impact. Secondly, the Lyddite explosives used suffered from the same malady as the British cordite propellant, that of being far too unstable. This led to the unfortunate situation that even shells hitting at perpendicular angles would often not penetrate the armour due to the shell bursting mid way through. Armed with this knowledge Jellicoe, on 18 October 1910, asked the Board for a new armour piercing projectile.[24] However, by 11 November 1911, the Board had deemed that armour piercing shells were to be used for close range actions where trajectories would be flat and perpendicular angles of impact would be achieved, therefore the Royal Navy would not need a new shell.[25] During the Battle of Jutland, the inability of the British shells to do real damage would explain why the British battle-cruisers' gunnery was so ineffective. Vice-Admiral Adolf von Trotha, Scheer's Chief of Staff, testified to the failure of the British shell: 'Of all the British heavy calibre hits sustained by our capital ships at Jutland, not a single armour-piercing shell penetrated any vital parts.'[26] Admiral Dreyer, who was one of the Navy's leading gunnery experts, although he was responsible for the appalling Dreyer gunnery tables, estimated that with an efficient shell, the hits obtained at Jutland would have resulted in the British sinking six German capital ships instead of the one.[27] It should be left to Jellicoe to sum up the consequences of the Ordinance Boards' failure to arm the Navy with an efficient projectile:

> We thus lost the advantage we ought to have enjoyed in offensive power due to the greater weight of our projectiles, while suffering the accepted disadvantage in the protection of our ships due to the heavy weights of our guns and ammunition.[28]

The myth of the battle-cruisers' 'indifferent armour protection' originates with the British high command of the Grand Fleet during the war, notably Jellicoe and Beatty. However, these statements, which have done much to obscure the true culprits, have stuck to one of Britain's greatest achievements in ship design and tainted the view of battle-cruisers. The failure of the battle-cruiser in the First World War is one of British society and Royal Navy doctrine. The Grand Fleet severely suffered from the British industrial decline of the early 20th Century and Victorian values which looked upon questioning procedure with disdain. Great Britain had been dominant in all her spheres of influence for the last 200 years and complacency was rife in all levels of the British war machine. The battle-cruiser was, in truth, given adequate armour for the time, and Royal Navy ships were also faster than their opponents with greater offensive power, apart from the poor shells. It is an unfortunate fact that it needed five British ships to explode and the Royal Navy's guns to be crippled before these material and doctrinal failings were finally remedied.

The *Hood* disaster

On 24 May1941, Rear-Admiral Wake-Walker in HMS *Norfolk* sent the simple signal: '*Hood*

blown up.' This earth shattering loss was immediately attributed to *Hood*'s being a battle-cruiser; her 'indifferent armour protection' had once again failed resulting in the loss of 1,418 officers and men. This traditional view is again unfounded, another modern myth; however, society continues to attach these unfounded prejudices to arguably the Royal Navy's greatest ship. The loss of the *Hood* could have been avoided, but once again we can see a conflict of interests which prevented the necessary measures taking place. It is vital to understand how the destruction of *Hood* was caused. The inquiry into the disaster gave its conclusions on 10 October 1941. It stated:

> 1. The sinking of *Hood* was due to a hit from *Bismarck*'s 15in shell in or adjacent to *Hood*'s 4in or 15in magazines, causing them all to explode and wreck the after part of the ship. The probability is that the 4in magazines exploded first.
>
> 2. There is no conclusive evidence that one or two torpedo warheads detonated or exploded simultaneously with the magazines or at any other time, but the possibility cannot be entirely excluded. We consider that if they had done so their effect would not have been so disastrous as to cause the immediate destruction of the ship, and on the whole we are of the opinion that they did not.
>
> 3. That the fire which was seen on *Hood*'s boat deck, and in which UP and/or 4in ammunition was certainly involved, was not the cause of her loss.[29]

However, the official report was not fully accepted by everyone within the Admiralty. In June 1941 the Director of Naval Construction (DNC), S. V. Goodall, made the following comments on the report:

> But a certain amount of mystery attaches to the occurrence. [That of a shell detonating a magazine] There is a consensus of opinion that the centre of the explosion was at the base of the main mast 65 feet away from the nearest magazine. If the large quantity of cordite contained in this and the magazine still further from the mainmast had blown up, there is no doubt that the resulting violent explosion would have been observed much further aft than it was actually observed. Is there any other possible explanation that would account for an explosion at the base of the mainmast and the consequent rapid foundering of the ship?[30]

The DNC also detailed an alternative theory which involved the detonation of the torpedo armament and the huge amounts of ready-use 4in and UP ammunition contained in the immediate vicinity of the mainmast. This theory fits the evidence that the shell hit around the mainmast and the fact that the explosion is seen in that area. There is some doubt as to whether the damage caused would be severe enough to cause the ship's back to be broken; however, *Hood*'s design and age would support the theory. The battle-cruiser's hull was 860ft long and over twenty years old with her main turrets mounted very far apart, relatively close to the ends of the ship. This meant that her hull had to withstand excessively heavy bending loads. Therefore it is reasonable that with the added strain of operating at 29 knots in rough weather, the detonation of the torpedoes and ready-use ammunition could have resulted in the ship breaking its back. Unfortunately it is unlikely that the circumstances surrounding the loss of HMS *Hood* will ever be fully understood, without the remains of the ship being examined. However, the reasons behind the loss are the same with either theory; the type or class of ship is irrelevant to the cause of the disaster, which again is an external element. HMS *Hood* was completed in 1920, four years after the battle of Jutland, and so a number of modifications had been incorporated into her design drawing on battle experience. Due to the High command's view that thin deck armour had resulted in the losses at Jutland, 5,000 tons of extra armour was incorporated into the design.[31] This had the result of increasing the belt armour from eight to 12 inches and materially increasing the armour on the decks over the magazines resulting in a total of 6.5 inches over the forward magazine and seven inches aft. By the time she was

completed, she had the thickest armour protection in the Royal Navy. The myth of HMS *Hood* being a 'poorly protected battle-cruiser' can not be substantiated. However, by the 1930s it became apparent that the Royal Navy was in desperate need of modernisation; the threat of air attack and the increasing range of naval guns was beginning to take its toll on the capabilities of the Royal Navy's ageing fleet. It was apparent that every Royal Navy ship, with the exceptions of *Nelson* and *Rodney*, was vulnerable at ranges of over 12,000 yards and a major programme of modernisation was urgently required. Of the ships available, only the 'Queen Elizabeth' class, *Renown*, *Repulse* and *Hood* were suitable for a full modernisation. Of these ships, *Hood* was seen as the least urgent case; she was after all the youngest, and she had the most extensive armour protection. The first ship to be re-built was *Warspite* in 1934 followed by *Renown*, *Valiant* and *Queen Elizabeth*. By this time the state of *Hood* was becoming quite desperate. The internal machinery was now twenty years old and was showing disturbing signs of wear. If she was to steam at high speed for an extended period of time, as she would be required to in war, she would need reboilering and the turbines re-blading. *Hood*'s horizontal protection was by 1930s standards too thin and her anti-aircraft protection was pitiful. At a meeting of the Sea Lords in March 1939, the First Sea Lord stated:

> If this ship is to last another fifteen years, which is probable, it is evident that the vessel will have to be laid up for large machinery repairs and it will be a matter of eternal regret afterwards that the big thing [the planned complete reconstruction] was not done.[32]

Her reconstruction had been planned to commence as soon as *Queen Elizabeth* had finished hers, however, to our 'eternal regret' this was never achieved due to war. The reconstruction was planned to include the following measures. *Hood*'s machinery was to be upgraded with modern Admiralty three-drum boilers which would replace the original installation. The secondary battery was to be fully replaced with eight of the new 5.25 inch twin gun turrets, which would have removed the hazard of upper deck ready-use lockers for the secondary battery. A second reduction in upper-deck explosives would have been achieved with the removal of the above water torpedo tubes which were considered obsolete and hazardous to the ship. The ship's superstructure was to be dramatically altered by removing the heavy armoured conning tower and bridge and replacing it with a modern block bridge structure as seen in the 'King George V' class. However, the most important part of the reconstruction was the development of her armour scheme. The plan had been to rearrange the protection by removing the upper five inch belt and to either (a) extend the 12 inch belt to the upper deck, increasing the thickness of the upper deck to 2.5 inches over the machinery spaces and four inches over the magazines, or (b) leave the 12 inch and seven inch belts as they were, and increase the thickness of the main deck to four inches over the machinery spaces and five inches over the magazines.[33] Either of these measures would have greatly improved the survivability of her magazines. If this modernisation had been achieved before the war, the cataclysmic explosion, caused by either a combination of the torpedo warheads and ready-use ammunition, or a shell penetrating to the four inch magazine, is unlikely to have occurred. Therefore in hindsight, the decision to modernise *Warspite*, *Valiant* and *Queen Elizabeth* before *Hood*, gave us three modern but obsolete battleships whereas, by modernising *Hood*, we could have had the equivalent to a modern, fast battleship.

Conclusion

It would seem that the battle-cruiser in the Royal Navy has had much unfounded criticism directed at it through both ignorance and malice. It is unfortunate that the old adage, 'A bad workman always blames his tools,' is often true today, just as it was in the aftermath of Jutland. The misconceived statements of the battle-cruisers' 'indifferent armour protection' do much to cover up many of the mistakes and errors within the system which can all too easily be made in the

contemporary Royal Navy. At Jutland, the Grand Fleet was armed with a shell which was designed for naval combat in the 19th Century and clearly not up to the task, in much the same way as during the Falklands conflict in 1982 we were fighting with missiles such as Sea Slug, which was designed in the 1950s. It would seem that we are reminded time and time again of the importance of keeping up with technology; however, it is evident that the Royal Navy continually finds itself in the same unfortunate positions. The lessons of ships such as the battle-cruiser should not be forgotten or twisted by myth. Again, it is easy to draw parallels between the battle-cruisers' exploding due to no protection against cordite flash, and Type 42s in the Falklands having no 'hard-kill' protection against missile attack. It is therefore important that we do not succumb to such myths. The myth of the battle-cruiser is that they were all poorly armoured and therefore were duly sunk. If this reason for their loss had been accepted, it is probable that the Royal Navy would have still been sending our seamen to sea in tinderboxes in 1939. However, myth is already being accepted in our own generation. The myth of the Type 42s' poor air defence capability and the failure of Seadart, would seem to be prevalent today, when in reality, it was the Argentinean knowledge of the weapon's effectiveness which forced them to operate permanently at low level.[34] It is all too easy to accept these myths as the truth, preventing us from learning the true background of our mistakes. It is only through a thorough knowledge of the past that we can prepare for an uncertain future.

JASON WHITE
SUB-LIEUTENANT, RN

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Admiral Duncan Re-Remembered

FRIDAY 9 October 1998 was a miserable morning in Dundee, driving rain and scudding low cloud, with the temperature about 10-12 Celsius. Those of us involved the following day were apprehensive, as one of the events was to be the unveiling of the final plaque to be fitted on the plinth of Admiral Duncan's statue in the city centre; the statue itself was unveiled exactly one year ago, on the 200th anniversary of the Battle of Camperdown (or Kamperduin, if you are reading this in Dutch).

The weather cleared up somewhat in the afternoon, and glory be on Saturday morning we had blue skies and sunshine. In the shadows of the buildings, or out of direct sunlight, one felt the breeze quite sharply, but at least it was a dry, bright and cheerful day. Funnily enough, the weather on the big day in 1997 was almost exactly the same, clear skies, sunshine, but with a chilly wind. Up here north of the Tay we describe it as late summer freshness; softies from Surrey or Somerset would say 'Nice and bright! But cold! Bitter wind!' and mean it!

The guests assembled in the City Chambers for a cup of coffee at 11:30. We had sent out invitations to as many people as we could think of, to all those who had expressed an interest, or who had attended last year, or both. The first real event this year came as a surprise, in that we were marshalled, all 120 or so of us, led by the Lord Provost, to have a photograph taken in the City Square, on the steps of Caird Hall. (Sir James Caird, Bt., was a great benefactor of Dundee and one of the main financial supporters of Sir Ernest Shackleton's expeditions; there is still a very-much-alive 'James Caird Travelling Scholarship Trust' which supports local students.) This mass photograph hadn't featured on the programme, but then as we all know, a programme is just a piece of paper to write amendments on, isn't it? Getting 120 people to stand still, never mind to say 'cheese' all together, taxed the photographers somewhat, and I don't know, as I write, how successful they were. Certainly a good many guests seemed to know other guests, and were welcoming the opportunity to catch up with news. We then strolled en bloc the hundred yards or so to the statue, which is outside St Paul's Cathedral, for the unveiling.

The Lord Provost made some introductory remarks, and then he and Sir James Cayzer Bt unveiled the bronze plaque. This plaque records the fact that the statue was unveiled last year, who by, and who the sculptor was; we hadn't risked getting it ready for last year, just in case there was some last-minute hitch. But it is now fitted to the plinth for all to see, and is a splendid adornment to the statue. More photographs had to be taken of this little ceremony, of course. Why Sir James Cayzer? Last year, he contributed most handsomely to the funds, enabling us to commission the statue and have the ceremonies and celebrations that we had. It is beyond question that if he had not been so generous (he was far and away the biggest contributor) then the whole project might well have failed.

Last year, after the statue's unveiling, we had military bands in Dundee city centre, and a formal march-past, with the Lord Provost taking the salute. Two warships were in Dundee at the time, HMS *Montrose*, and the Netherlands frigate HNLMS *Jakob Van Heemskerk*; both these ships were, of course, represented in the march-past, as well as other organisations such as Sea Cadets. Flag officer Scotland, Northern England and Northern Ireland was present, as well as the senior Royal Netherlands Naval officer serving in UK; it was a big and formal occasion. This year was much more low-key, but not less significant and enjoyable because of that. One of the co-incidences last year was that it was the *Jakob Van Heemskerk* that was the Dutch warship; the vagaries of planning ships' programmes became very evident to us in Dundee, when the Dutch frigate was changed three times during the few weeks before it all happened. Eventually, however (and at fairly short notice) it was confirmed that we were to 'get' the *Jakob*. I managed to dig out the facts (which I knew very roughly) about Heemskerk's Arctic voyage in the 15th century with Captain Barents, after whom the Sea is named. I found it almost spooky that the day the frigate arrived in Dundee (9 October

'97) was within just a few days of *exactly* 500 years after Heemskerk himself got back from the Arctic – early October 1497. What an extraordinary co-incidence for us. (As an aside, it is interesting that the voyage of Barents, Heemskerk and others might never have been known about had an enterprising publisher not persuaded Surgeon Heemskerk to write of his experiences, and publicised them. The hut that they built in eastern Novaya Zemlya and in which they wintered – brrr! – still exists.)

From the statue we strolled (the 120 of us were never a formed body!) up to McManus Galleries, the main art gallery in Dundee. A reception hosted by the Lord Provost occupied the crowd for some 40 minutes or so, and it seemed to us organisers that the conversation level was appropriately high. We then walked through the gallery to another room where chairs and a lectern etc. were set out. We were given a first-class briefing on Camperdown House by a representative of the Arts and Heritage department (A&H for short) of Dundee Council. The house was built in the 1820s by Admiral Duncan's son, the First Earl of Camperdown (Admiral Duncan himself was 'only' a Viscount), and it is recognised as certainly the finest neoclassical house in Scotland, and of major significance in the UK's architectural heritage. It has been owned, with its spacious grounds, by Dundee City Council since shortly after the Second World War, and the huge question is – what are we to do with it? How can we best restore it, and give the house and the memory of Admiral Duncan the prominence we think they deserve? These are not questions that have easy or short answers.

The Council applied for, and received, a grant from the Lottery Heritage Fund to commission what amounts to a Feasibility Study; this was done by a distinguished firm of Edinburgh architects, who drew up a 'conservation plan'. I've glanced at this plan (it runs to two volumes and some 350-400 pages overall), but it hasn't yet been released for full study. No figure has been disclosed for the total sum required for all the conservation work to be carried out, but an intelligent guess might be somewhere in the region of £10 million, spread over several years. The impact of lottery funding is crucial to the whole project, but we will not know for some months whether or not we have been successful. As a consequence, we do not yet know how much we will have to raise, by various means, as our 'contribution'; no doubt it will be a considerable sum.

A formal trust with charitable status has been set up, the Admiral Duncan Camperdown Trust, and the three trustees meet regularly with Dundee City Council A&H, and will continue to do so. I am one of the trustees, and I must say that relations with A&H are pretty good; inevitably we the trustees have a differing viewpoint from City council officials, but we are all, I think, open and trusting. It bodes well for the future. Moreover, the project as a whole has the enthusiastic support of the National Galleries of Scotland (Dr Timothy Clifford), and the Scottish National Museums (Dr Richard Caldwell), which I am sure will stand us in good stead.

It would be foolish, however, just to sit back and wait for the great lottery to make its momentous decision; there is one smaller project which we are progressing as fast as we can. This is to assemble a proper record of last year's ceremonies and events, to be bound in a handsome leather book, and (we hope) to be available in Camperdown House when it opens to the public. There is a mass of photographs, newspaper clippings, radio and television coverage, etc., all of which we would like to incorporate. The task of editing it all will not be an easy one; we haven't yet found the right person to be editor!

We hope, in addition, to set up a Friends organisation, and we have already chosen a date for the launch of this initiative, which will be 4 March 1999. A peculiar date, one might think, but it is linked closely to events in McManus Galleries. Last year, there was a highly successful exhibition called 'Glorious Victory', a commemoration of the Battle of Camperdown; it attracted over 50,000 visitors. This year there is a follow-on, entitled 'Camperdown Re-Visited'; this will run until early March 1999 and it already looks like being equally successful. We have chosen the

date for launching 'Friends' to co-incide with the end of this second exhibition. All fingers and toes crossed, we will by then have a clear (or at least clearer) idea of the lottery money situation in particular.

Another mention of the Dutch connection is, I think, appropriate. An author called Johann Fischer has written a book called *Delft* – a history, not of the china-making town, but of a ship which participated in the battle of Camperdown (and was sunk). I regret I don't speak or read Dutch, but I've looked at the book, as McManus Galleries holds a copy; it is a magnificent volume, and clearly full of interesting detail. The Dutch are way ahead of us, as they are already in process of restoring an eighteenth century mansion originally belonging to the Dutch East Indies Company. Moreover, they have started building a full-scale replica of the *Delft* to be a museum alongside the mansion. They have some 20 million guilders (say £8m) and are going ahead. Mr Fischer himself visited Dundee last year, and was full of enthusiasm for the work we are engaged in. He went so far as to leave a cheque with me, and can rightly be regarded as our first contributing 'Friend'. It was a pity that he couldn't come again this year.

It would be wrong to use this summary of the 'Duncan situation' as an appeal for funds. I hope, however, that the Editor may permit me to publicise the setting-up of the 'Friends of Camperdown' organisation after we have done so next year; *then* you can get your cheque-books out!

H. L. FOXWORTHY
COMMANDER, RN

Three Great Admirals – One Common Spirit?

LIEUTENANT Commander Eugene Fluckey (later Rear Admiral) commanded USS *Barb* during five legendary patrols against Japanese shipping in 1944/45. He was awarded the Congressional Medal of Honour and four Navy Crosses – the UK equivalent: the Victoria Cross and four DSOs. He was the most decorated United States Naval Officer of World War Two.

Although pressed over many years he steadfastly refused to write a book covering *Barb*'s operations until time permitted a thorough research into the Japanese archives. He was anxious to ensure that the Japanese account of every one of *Barb*'s engagements would be fully recorded alongside his own combat reports.

Post-war he spent some time as Commander Submarine Western Pacific, based at Yokosuka, Honshuu; had helped to establish the Japanese post war Torpedo School, using US supplied torpedoes; and was responsible for training the first Japanese Submarine crew to take over USS *Mingo* – re-named *Kurashio*. The five young officers of that crew became his close friends, and remain so to this day. Four in later years rose to Flag Rank.

This experience and associated contacts/friendships enabled the required research into the Japanese archives to commence in 1978, initially into the Japanese records held in the Washington DC files and – by correspondence – into the Japanese archives themselves. By 1980 he had acquired considerable detail, including the Japanese Battle reports of *Barb*'s sinking of the Carrier *Unyo* and the tanker *Azusa*.

Subsequent to considerable success, in 1983, it was agreed with his Japanese associates that to achieve total success a lengthy personal visit to Tokyo was highly desirable, if not essential. During this visit a senior Japanese Naval Captain, a Commander and Lieutenant were assigned to him for as long as required to complete the research. The resulting book, *Thunder Below*, an exciting record of the most remarkable submarine attacks and operations, was awarded, in 1993, the Samuel Eliot Morison Prize as the Best Book on Naval Subjects.

With the research complete, and before his return to the United States, the Japanese authorities closed the 'Togo Shrine' at Yokosuka to all public visitors and held a banquet there to honour Admiral and Mrs Fluckey. During this private visit, and unique tour of the Shrine, all the display cases were opened and their guests invited to handle all the exhibits. Margaret Fluckey, glancing through one of Admiral Togo's personal diaries, was surprised to find they were written in English. The Admiral had, of course, been one of the first Japanese Naval Officers to be sent to England for Cadet training in the middle of the 19th century – pre-Dartmouth – and was later the Japanese Naval Attaché in Washington.

By chance the following sentence caught Mrs Fluckey's eye: 'I am firmly convinced that I am the re-incarnation of Horatio Nelson.' Re-reading this fascinating sentence her startled exclamation drew the attention of all. It was then that Admiral Fluckey noticed that the collection included numerous photographs of Fleet Admiral Nimitz at various stages of his Naval career. This surprised him because, although he had been a personal aide to Admiral Nimitz – and later a close friend – an intimate association with Admiral Togo had never been mentioned. He was, however, fully aware that Nimitz firmly believed Togo to be one of the greatest Admirals in Naval history.

Admiral Fluckey enquired of his hosts why were there so many photographs of Admiral Nimitz in the showcases? Adding, as a statement of fact, 'He was the one who defeated Japan in World War II rather than General MacArthur.' With the usual enigmatic smile his Japanese host replied, 'but Admiral Nimitz did so much for Admiral Togo, and therefore for all of us proud of our Naval heritage. Moreover, during the closing months of World War II, with the heavy bombing of Japanese cities, Admiral Nimitz ordered that no Allied bombing was to be targetted on the Battleship Memorial *Mikasa* – Admiral Togo's flagship when he annihilated the Russian Baltic Fleet at the decisive battle

of Tsushima Strait in 1904.' (In Japanese eyes the shrine is the exact equivalent to the respect the British show for Admiral Lord Nelson and HMS *Victory*).

Furthermore, the host added, 'After our surrender Admiral Nimitz had the moorings of the *Mikasa* cemented between the piers so that the ship could never sink. He also dedicated all his personal profits from his book, *The Great Sea War*, to the rebuilding of the "Togo Shrine".' The detail surprised Admiral Fluckey for, close as he had been to the Fleet Admiral, none of this had ever been mentioned.

Looking further at the many photographs there came the greatest surprise of all! Captain Nimitz was in command of USS *Augusta* in 1934 when Admiral Togo died. He attended, with other official foreign delegates, the Lying-in-State ceremony. In the showcase was a large photograph of the event with Captain Nimitz in the front row. The record included the comment, that as Captain Nimitz passed Togo's body he is reported to have said, 'I feel the spirit of Togo flowing into me.'

Three of the world's greatest and most successful Admirals – Nelson, Togo and Nimitz – how close was the link?

R. W. GARSON
CAPTAIN, RN

If you Goes Ashore – You Goes Ashore

AS the last man I relieved in the BPF had been on draft to the RN Barracks in Kure, later named HMS *Commonwealth* it was not surprising that I found myself, in April, 1946, serving in the British Commonwealth Occupation Force. The Royal Navy had taken over a part of the old Japanese Naval Barracks; the remainder, separated from us by two fences and a right of way – or lane – was taken over by a Headquarters Signals unit of the Australian army.

Their domicile has been commemorated in a book entitled *The Pattern Of Conquest*, which infers that, whereas the pattern of conquest is rape and loot, our occupation was confined to seduction and black market – a similar thing, but all done in the British way.

The old Japanese barracks had been built substantially of wood and we proceeded to bring these buildings up to our standard. The outside of such buildings was lathed and cement rendered and the inside panelled with soft board. When colour washed, they looked quite pleasant and substantial.

We now proceeded to make ourselves comfortable and to indulge in some kind of social existence. There was a non-fraternising bar between the armed forces and the Japanese which, although not strictly observed, precluded the open exchange of hospitality – limited as this inevitably had to be.

Our social life, then, consisted of visiting other units, mainly Australian army messes, and in receiving them in return. In addition to my many commitments, having been seconded to the S.C.E. Dept. (Superintendent Civil Engineer), which dept. was rebuilding the Naval Barracks and Port Directorate, I was also President of the mess and dedicated to making it the show piece of the barracks, which it eventually became.

Commander Hamilton achieved for Chief and Petty Officers the unusual privilege, at that time, of a monthly allowance of wines and spirits; no doubt to enable us to return some of the hospitality we received in the army messes.

When we had visitors, we helped each other out by contributing the odd bottle, or part of a bottle, and we were benignly appreciative if our guests, or some of them, crawled out, rather than walked out, after an evening with us. Of course, it worked both ways.

BCOF Headquarters was in Etajima, an island about eight miles from Kure, to which there was a regular ferry service. My mess was very friendly with the HQ Sergeants' mess and there was a frequent exchange of individuals, or parties, between the two messes.

On one memorable occasion, I went over to Etajima alone and had a very pleasant evening in the HQ mess. They were probably out to fix me, but I was unsuspecting and, for once, dropped my guard and took my time from them. The consequence was that I missed my proper ferry and had to take the next one – the last one, I think – which landed me in Kure at forty five minutes past midnight completely and happily sloshed.

The barracks gate was only about two hundred yards from the ferry terminal, but I had great difficulty in traversing this distance. As I entered the Royal Naval Barracks, I saw, in line abreast, a most formidable array. There was Captain Miers, RM, Officer Of The Day, Sub. Lieut. Anderson, Officer Of The Watch, Jimmy Quorton, SCE Chargeman, Zasu Pitts, PO Of The Day, the duty Stoker PO, who was in charge of the Fire Party, and a couple of ratings – who were to be my escorts, I thought. What a bloody lash up – and all because I was fifty minutes adrift.

I smartened myself up and staggered towards them, at the same time, at long range, starting to make my apologies and explanations. As I got nearer, Jimmy Quorton was shouting 'The parade ground is flooded; we've got to get the water off.' He was a dockyard man, so I ignored him, and proceeded to tell Captain Miers exactly how it came about that I was adrift. Jimmy kept shouting 'We can't stop the water; the parade ground is flooded.' In my earnest dialogue with Capt Miers, I found time to say ' Shut the main valve', then carried on with my explanations. Jimmy yelled back 'We've tried every way and can't stop the water; it's up to you.'

In my befuddled state, I thought they were

building up a case against me and, very much on the defensive, said ' I know I'm adrift, but wait till you hear my side of the story.' They were very patient and heard me out and, at last, I realised that there was no question of my being charged with being adrift; all they wanted from me, most earnestly, was for me to shut the water off.

We made our way, en masse, to the large valve chamber at the rear of the guardhouse, which had had several visitations that night. It was about six feet long, by four feet wide, and about eight feet deep. I turned to Jimmy Quorton and asked, 'What have you done, so far?' He replied, 'I've shut the three valves to the water main, fire main and elevated storage tanks.' 'How did you shut them?', I asked. 'I turned the valves clockwise,' said he. 'Well, you're a bright bugger,' said I, 'The fire main valve closes anti-clockwise.' Muttering 'I'll show you', in my eagerness I promptly fell down into the valve chamber with an almighty clatter. I was lucky; I fell astride the pipes and was only slightly shaken. It was very dark in the valve chamber and not much better above ground.

A voice came from up top. 'Has he got his Number Ones on?' (Probably this was the OOW). Thankfully, I said 'No, my Number Twos.' Everyone sounded relieved and Jimmy Quorton passed me down the stopcock key, with which I promptly shut off the old fire main, which I realised had been the cause of their distress. When I climbed up out of the chamber, the flooding had stopped and I was complimented. I staggered off to my dormitory and flaked out.

Next morning, I wakened up with drunkard's remorse and, after my ablutions, made my way across the parade ground to the dining room. I saw with satisfaction that the parade ground was mainly dry; certainly it was functional, and I thought myself lucky to have got out of the rattle so easily.

When I sat down to breakfast, the first person I saw was Zasu Pitts. He looked at me and roared, as did some of his colleagues who had obviously been told the story. I knew then that as far as the executive branch were concerned, I had put up a good show. As they would say; ' If you goes ashore, you goes ashore!'

BILL BATTERS

Editor's Note: Sadly, Bill Batters died in November 1997. This article is printed as a tribute to a unique contributor to *The Naval Review*. I am sure he represented for many of us not only that which was best in the 'old navy', but in any navy. We hope all his family will accept our sympathy.

Correspondence

SDR AND THE AIRCRAFT CARRIERS

Sir,–Thank you MEO. I hope you are part of a major internal debate, and not a lone voice. Only the fortunate invention of a spiffing wheeze (Harrier) has allowed us second chance to convince the nation of a balanced fleet. The loss of fixed wing carriers changed the public perception of who we were, and if we get it wrong this time our sense as a maritime nation will be gone forever. It is thus of national, not just defence or mere naval importance.

The CVA 01 Adelphi paper was a good read, and shows the error of top quality C3 systems unaligned to future government intentions. Importantly, the reasons for command systems that caused the Through-Deck Command Cruisers to be built, are the self-same reasons that caused CVA01 to be scrapped. So don't follow the *Invincible* contract strategy. It won't be.

Anyway, 200 miles off the littoral (HMS *Hermes* – 1982) is not where Joint Command and the Generals will wish to be. Aircraft carriers carry aircraft, so there are only two questions: what aircraft can it carry; and how well can it carry them.

What aircraft

HM Treasury has invested £13B in the European Fighter Aircraft (EFA) based upon a performance 'S-curve' from BAe. They would appear foolish investing in anything else, unless the Future Carrier Borne Aircraft (FCBA) is on the upper knee of this curve, and I don't think it is. The Treasury will not want to appear foolish, and the RAF will not want to be side-lined. So any attempt at RAF redundancy will precipitate a successful ambush, as occurred with CVA 01. 'Buy-in' the RAF now and plan for EFA landings.

How well

How will catapult steam be generated? What is the minimum deck length for combat? How do you maintain a thin titanium cased Eurojet 2000 on a rolling platform? How many?

All else (AEW choice, helo operations, BAe Goshawks, defence and comms, speed and protection) are secondary. I don't agree with all MEO's suggestions, but once you strip out the expensive C3 systems consider this: can you refit commercially in 42 days thus keeping both carriers available? That's what Southampton can do for QE2.

K. VICKERS

Sir,–In his article 'SDR and the Aircraft Carriers' (*NR*, Oct '98), MEO quite rightly invites us to challenge our assumptions and aspirations for the carriers to ensure that they do not become unaffordable. Laudable though this is in principle there is one area at least where he has picked up the wrong end of the stick. On the subject of communications and information systems he says that we have fitted systems 'to remain compatible with the latest technological advances' and that the ship only needs 'that which is necessary for the control and tasking of the embarked aircraft'. Wrong on both counts. New systems are being fitted to endeavour to retain interoperability with allies, notably the US, and to seek to capitalise on the advantages given by achieving at least a degree of information superiority. Our carriers will be of little military utility if they cannot be integrated into a coalition force and be able to receive and report back the complex targeting and other information required. By their very nature, and their importance in power projection terms, these ships will need sophisticated C2 facilities. By all means use commercial build standards where appropriate in the ships, choose an economical propulsion system and so on but don't compromise on their key military *raison d'être*. For if we fail to equip these ships properly at build with at least the core infrastructure for C2 we will surely have to fit it later at three times the price.

A. I. H. CLARK
CAPTAIN, RN

Sir,–The key point in MEO's 'SDR and the Aircraft Carriers' (*NR*, Oct '98) is quite accurate – the greatest danger about the proposed carriers is that they may not be built at all. However, I think that MEO's main

assumptions are too simplistic and ignore some of the lessons of history. The old maxim that 'navies plan for the next war by preparing to fight the last one' is certainly true in the assumption that all future conflicts will include a large (friendly) international force of overwhelming strength, which sounds strangely like the Gulf War. Whilst the new carrier must be able to contribute effectively in such situations, it would truly come into its own in a national, Falklands-type scenario, where air superiority is hotly disputed and the enemy the potential equal or even superior in force. In either case, the carrier will nearly always be a Mission Essential Unit, and therefore the enemy's primary target. This means that, as MEO says, the designer's aim should indeed be 'to produce vessels which can deploy a significant number of offensive aircraft', but also that this ability must be sustainable in the face of enemy action.

Bearing this in mind, irrelevancies must be dismissed completely in a 'radical approach' (by which I hope MEO means a shorter development time, less movement of goalposts during project specification and systems that are fully capable at the same time the ship becomes operational, not five or ten years later). The physical structure should be sound and carry minimal risk, but must be able to take damage. MEO seems to assume the carrier will never be hit, which seems somewhat optimistic for a warship. The ability to take damage without a significant reduction in flying operations could be the difference between a campaign's success and failure. Therefore, any reduction or skimping of NBCD systems must be resisted – including realistic assessments of the manpower requirements.

Savings can be made, however, by not including any ship based weapon systems. Having said that, the addition of a modern, cost-effective, bolt-on point defence system, of which there are several options available from off the shelf, is essential to increase survivability. An EW capability is probably an unnecessary luxury, although a case could be made for decoy systems. A Command and Control suite could also be left out if the budget is tight, although I would ask where else the PJHQ could operate from – surely not a Batch 3 Type 22? However, I think MEO's statement that no special measures should be taken to reduce signatures because then the enemy will know she is there is a view most Warfare officers would disagree with. The enemy will know if a carrier has been sent to the area by watching CNN! Making it easier for the enemy accurately to attack his major target will not increase the chances of it surviving, and a good initial design can make this much more difficult without a huge increase in expenditure.

MEO and I both agree about the importance of the proposed carriers to the Royal Navy. Without them, we sink from the second to third division of navies, and much of the new planned expenditure becomes hard to justify. However, there is a huge difference between a fighting carrier that can go 'into harm's way' and a white elephant that provides prestige for the Government but very little in the way of military effectiveness. It would be far better not to build what would be an exorbitant waste of resources and spend the money on the rest of the Fleet if the alternative is a platform that looks good, sounds impressive and is far too valuable to risk in battle. The first skirmish of the carrier 'war' is won – an expression of intent to replace the CVS; however, the real battle is only just beginning.

DMJ

EUROFIGHTER/TYPHOON

Sir,–I like to think of myself as a pretty joint sort of chap; I was, after all, staff trained at the RNSC, served on a Flotilla staff for just under two years, and was later a member of one of the first JFHQ staffs to embark in a CVS. I have continued my membership of the *NR* for 14 years now, specifically to keep in touch with views from the Senior Service, with which the RAF shares so many operational interests and disciplines.

It pains me, therefore, when I still see regular carping in the *NR* over the perceived lack of justification for the procurement of the Eurofighter 2000, or Typhoon, as I hope we will call it when in service with the RAF. MEO, in his 'SDR and the Aircraft Carriers' in the October issue, makes a typical, yet

uncalled for throw-away line, when he refers to *'the RAF's all but redundant Eurofighter programme'*. He is not alone in making this sort of swipe at our next generation of fighter aircraft.

I agree that the programme has not gone well, by over-running in terms of both cost and time. To be fair, however, much of the fault for that lies with our German cousins, who have constantly prevaricated over their commitment to the programme and, at times, threatened to withdraw from it altogether. That said, it is undeniable that the UK has been responsible for some of the delays. Nevertheless, that is not the point of my letter. It is the operational justification for a modern, 4th generation, air superiority fighter that I feel some *NR* members need to be convinced of.

SDR has firmly tasked the UK Armed Forces with an expeditionary role. As such, we need the ability to deploy and operate our forces in a favourable air control situation. Whilst I applaud the decision to specify two future aircraft carriers to replace the 'Invincible' Class, we cannot rely on even the enlarged air group that one of these will carry, to provide anything like adequate air cover for land forces. What is needed for this is a land-based fighter with both active and passive sensors, a large BVRAAM weapon load, and a full defensive aids suite to ensure its survivability. That is what Eurofighter-Typhoon will give us. What is more, it is flying today and will be in service in under four years' time. The new carriers, and whatever is embarked in them, are more than three General Elections away from RN service. The Harrier F/A2 is a good weapons system, but can never be made available in sufficient numbers to sustain a defensive counter-air shield over the battlefield, whilst providing for the air defence of its own Task Group.

The present Government is entirely correct in committing itself to the Eurofighter-Typhoon programme. There is a clear and urgent need for it in the context of out-of-area campaigns, which the SDR required of us and then went to some lengths to provide us with the necessary logistic support. Moreover, the programme also promises to bring the United Kingdom significant export sales benefit, even if only one of the current marketing campaigns in Australia, the Far East, Middle East or Northern Europe were to bear fruit.

Hands off Eurofighter gentlemen; let us fight our battles together!

DAVID M. MOSS
GROUP CAPTAIN, RAF

THE STRATEGIC DEVELOPMENT OF UK ARMED FORCES

Sir,–In his article 'The Strategic Development of the UK's Armed Forces' (*NR* Oct '98, p.302) Kelly uses the vehicle of the Strategic Development Study (recently renamed the Joint Defence Centre Study) to expose a number of extraordinary issues. Is it true, for example, that until the SDR unravelled the knots our Defence Policy did not look further ahead than 4 or 5 years ('and almost never longer than 10')? What then have our esteemed 'Centre Staff' and planning directorates been busying themselves with?

Of course, Kelly provides the answer himself. A meaningful joint vision is impossible while the three single service visions remain in place. The very officers who man the deep purple desks of Operational Requirements (under DCDS(C)) and who people the deep maroon offices in the Programmes and Plans area (under DCDS (P&P)) are, in fact, skinned in the more natural colours of dark blue, light blue and khaki. Their performance (and career prospects) is judged on the success – or failure – of their ability to push similarly coloured equipment through the tortuous procurement process. Joint ethos for the cost-effective strategic development of and provision for the UK's Armed Forces? Not a bit of it.

The reality of the skin deep purple world is embedded inter-service rivalry, mistrust, hidden agendas, anger and insult. The struggle for resources in a fiscally constrained environment perpetuates the single service protection of its own property and programme by striving to achieve a more prominent role in future military operations. The product of the three single Service warfare centres must be interpreted in this light. In the deep purple

jungle joint strategic discussions are no more than a thinly disguised struggle for money.

Meaningful joint discussion at the operational and tactical levels is in progress at the PJHQ and the JSCSC. The product is clear to see and applauded. Until such dialogue also becomes viable (even permissible) in the deep centre circles of Force Development, Operational Analysis and Procurement the ethos of jointery will remain skin deep.

The Joint Defence Centre provides an opportunity to build not only a focus to the development of joint doctrine (at all levels) but also the lever with which to ensure that joint doctrine and concepts are translated into defence equipment that the UK needs, rather than what the single Services want. The JDC must replace the current sources of single Service advice to the centre. If, as is likely, it comes on line in parallel to current dark blue, light blue and khaki structures, it will not have the desired impact. And the colour purple will continue to be washed away with the more traditional, persistent and penetrating colours of the three Service uniforms.

I still value my career so sign off under a pseudonym.

ALEXEI

GENESIS OF THE PWO

Sir,–I wrote an article entitled 'The Cat Amongst the Pigeons' which appeared in the *NR*, Jan '85 at p.40; it bemoaned the sorry state of the PWO that prevailed at the time – I had just completed my first appointment as a PWO. Subsequently, I ended up as the Staff Officer running PWO courses at HMS *Dryad* (just retribution from the system!) before going on to Fleet and MoD staff appointments and finally sea going command. Recently retired from active service, I see another perspective. The PWO is a great success (specialist or generalist) as every warship relies on their presence and professionalism implicitly, but is that enough?

The cyclical nature of the day to day organisation and conduct of business of the Royal Navy continues unabated and at each turn a little more accommodation is made with the external environment in which the Navy finds itself. Technology, strategy and the potential threat relentlessly bear down on day to day naval activity. Today's people inherit yesterday's decisions and have to cope with tomorrow's challenges. This is the norm in activity across society. It is what in 'business speak' is called 'change and knowledge management'. It is something that naval people are inherently good at but this institutionalised intellectual capital is not, methinks, fully realised. It is not vocalised and is not regarded as a core skill.

How does this relate to the PWO debate? The PWO is doing an excellent job with today's technology in the Fleet along with the evolving Warfare Branch of ratings. Is the debate about the PWO the right debate? Of course we need world class leadership, professional combatant unit operation and proficient technical services laced with a good measure of sound housekeeping but what else? The challenge of harnessing tomorrow's technology and strategy to counter potential threats is essential if tomorrow is going to be anything more than a repeat of yesterday. We do not have a very good record of preparedness! Conflict is determined on the margins of capability. Being at the cutting edge of innovation is a critical success factor. Innovation is the catalyst for advantage.

My plea is that the Royal Navy spends a little more time thinking about the sort of people needed for the future and training them for tomorrow rather than looking backwards and training them just for today. Simple really: know the aim (strategy), maintain moral (leadership) and innovate with cutting edge technology. It seems a pretty good cocktail, any ideas?

PAUL FISHER
COMMANDER, RN

THE THREE Rs

Sir,–When the First Sea Lord retired recently *The Financial Times* commented that, when he joined the Navy in 1956, his annual salary was £146 (8/- a day). Those of us who served in the years of penury will be reassured that today's officers think themselves reasonably paid, and are not impressed by the blandishments of a KPMG manager (*NR* July and Oct. '98).

Commander Alastair Wilson reminded us of the privileged non-contributory inflation-proofed pensions which the Armed Forces enjoy. But do they realise how much this is resented in the private sector? In the early 1980s I was employed by a large well-known manufacturing company. It was a time of rising inflation, and the Unions were pressing high wage claims to compensate for their loss of living standards. There was widespread criticism of Civil Service index-linked pensions by those who saw their own private sector pensions shrinking in absolute terms, both by those I worked with and in the correspondence columns of *The Times* and *Telegraph*. This caused the Government to appoint the Chairman of Lucas Industries to investigate. Surprisingly the Scott Commission found that, not only was index-linking of public service pensions justified, but they recommended the private sector should be brought into line.

There was an outcry from the National Association of Pension Funds. Their funds were of finite dimensions, and the ability to increase payments in line with the cost of living was limited by actuarial considerations. The Government took no action. During the ensuing years there was an enormous escalation of stock market values and the pension funds prospered exceedingly. Many companies were able to improve substantially the benefits to their members, but as there was no legal obligation to do so, others did not, preferring to boost the balances in their funds.

Continuing discontent with the quality of company pensions led the Government in 1992 to appoint a Pension Law Review Committee chaired by Professor Roy Goode QC, to review the framework of law and regulation within which occupational pension schemes operated. The outcome was the Pensions Act 1995, which legislated for limited indexation of pension schemes, 5% or the rate of inflation annually whichever would be the lower, but *only* for that proportion of pensions earned after 6 April 1997. So it will not be until the year 2037 that occupational pensions will be fully indexed *by law*.

The prosperity of private pension funds was an obvious target for the incoming Government in 1997 and in its first Budget, some of the generous tax benefits they enjoyed were curtailed, but they had no legal obligation until a distant date to pass anything on to their members. Clawing back £5 billions to the Treasury led to bitter recriminations that a straight transfer was being made from private and personal pension funds to pay for public sector inflation-proofed increases, at a horrendous cost to the country for the benefit of early-retired teachers, police officers, army personnel and all public-sector employees. A letter to *The Times* of 2 August 1997 read 'why should the wealth-creating section of the community pay for the pensions of others, which they cannot afford for themselves?'.

Of course, none of the foregoing affected the higher echelons of business managers, whose remuneration in retirement usually greatly exceeds that enjoyed by anyone else. Indeed, some companies claim that their pension funds belong not to the members but to the shareholders, so that some pensioners whose companies were taken over suddenly lost the pensions they previously had.

To add by way of illustration a personal statistic, the small naval pension I was awarded in 1960 after 20 years' service had by 1998 increased by 1,225%! From 1960-1983 I was mainly employed by a large manufacturing company, contributing 5% of my salary to their pension fund. On retirement in 1983 my occupational pension based on final salary was 83% of my then naval pension. The company in its Annual Report declares its provision for increases to pensions-in-payment as nil, but then generously *may* make increases at the discretion of the company from time to time. These are infrequent and usually well below the cost of living index. Today, in 1998, my occupational pension is only 61% of my current naval pension.

Civil servants, teachers, the police and the fire service are organised in powerful trade unions which will resist any assault on their retirement benefits. The Armed Forces have no trade union. But the Officers' Pensions Society protects past, present and future members of the Forces and their dependants, and seeks to remove inequities and anomalies

in their entitled benefits. It is surprising and regrettable, therefore, that at the 51st Annual General Meeting of the Society in June, the Chairman, Air Chief Marshal Sir David Evans GCB OBE, reported that the total membership of the Society was steadily declining and had now fallen below 53,000. Partly this was because officers were not joining the Society on completing their military careers, because most were generally content with their pension expectations.

Such complacency is misplaced. The present Government is preparing a green paper on pensions reform and the Officers' Pensions Society is in regular consultation with ministers. The one organisation which safeguards the interests in retirement of the Services community deserves better support than it is getting from those it seeks to benefit.

G. F. PALMER
LIEUT. CDR, RN

LEADERS AND MANAGERS: CHALK AND CHEESE?

Sir,–The relation between leadership and management has long been a subject for wardroom and staff college discussion. Readers may however have missed the reported remark made recently by a senior British headhunter when commenting on why there are so many vacant slots in senior management of big companies in Britain. 'We have failed,' he said, 'to distinguish between management skills and qualities of leadership'. At a time when the armed services are increasingly under pressures of political correctness to become 'more business-like', is there a lesson that we need to note?

JAMES EBERLE

DISCUSSION IN THE *THE NAVAL REVIEW*

Sir,–I have been a member of *The Naval Review* for a few years now, and have to confess that my reading of it is very selective. This is not because I do not have time to read it, but rather because I do not consider that the many historical discussions and reminiscences are relevant to the '. . . higher aspects of the naval profession' in a peacetime navy, nor do they particularly interest me. I am aware of the perilous ignorance such a disregard can have, however in the meantime, I comfort myself by relying upon G. Hegel's perception 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' to hide my embarrassment when I find my historical knowledge is decidedly lacking.

This is not the point of my letter. What I do read with relish is the interesting articles and observations that reflect on the current problems, philosophies and solutions that impact on the RN today. The two which I offer as recent examples were both written by Alston: 'Leaders and Managers: Chalk and Cheese' (April '98) and 'Recruitment, Retention, Replacement – The 3 Rs' (July '98). The great disappointment is that there seems to be no comment, discussion or debate as a result of such articles. Whereas history has a part to play for those who can appreciate the lessons and recognise their applicability in a forthcoming encounter, the 'here and now' implications of what Alston and similar contributors have to say are fundamental to the RN's future, and so must affect us all. To pick up on my examples, surely those of us who aspire to serve in the Service for the next 20 years should aspire to shape the future of our Service. Every opportunity should be taken actively to debate and influence future management and leadership philosophies. What do we think about our senior management: do we respect them, should we respect them; how would we like to be managed, how should we manage our men, is there a difference; does the system reflect modern thinking, is Service ethos an anachronism; are opinions sufficiently well aired, and if they are, does it make a difference; how do we recruit, who do we recruit, and so it goes on. Articles like Alston's pose many questions, either directly or by implication, and they demand an opinion, if not an answer. At present, subscription to *The Naval Review* seems to be the be-all and end-all of the publication, as if an intellectual benefit accrues to the member for that reason alone. The inference that I draw from the *Review* and embedded reaction to it

is that we all read those articles that interest us in the same way that others read GQ or Woman's World, with short term pleasure in mind and to allow a total emptying of the mind. If that is advancing an understanding of the higher aspects of the naval profession, then the officer corps has only got itself to blame when the profession plunges into the abyss.

If there is any doubt that an abyss exists, then I offer the following to substantiate my opinion, starting with my personal perspective. I have long been considering my future within the Service, but there has always been a goal on the horizon to encourage me to stay. Now that I am within reach of that goal, I have discovered that, for me, it is not worth grabbing. Since my focus has diminished, I have had more time to consider the whole question of the Naval working environment, and this has led me to discuss my thoughts with my generation of Naval Officers, by which I mean Commanders to Lieutenants, broadly with 5 to 25 years' experience. I can honestly say that I cannot find anybody who is committed to a career in the Service. The most positive commitment that I have met is that people will stay until they have achieved what they set out to do; in the case of Warfare Officers, normally command a Ship or Submarine. Even this Holy Grail is diminishing in attraction as the probability reduces. Indeed of those selected in this year's promotion round, the only two colleagues to whom I spoke would have been quite happy to resign had they not been promoted. This in itself may not seem surprising, but since they were both early in zone, the implications are obvious. And here we are talking about Warfare Officers, and those with a likely expectation of Command. For others, confidence in the higher management has reduced significantly, without the expectation of a Command ever having been an option.

Furthermore, we are now victims of our own ethos. The RN has traditionally put its head down and got on with the task, exhibiting our 'Can do' approach. This attitude is commendable and has served us well. However, when combined with the stretch now being experienced by all, from gapping through stores shortages to fuel cutbacks and restricted entry/exit times to naval ports, willpower has been sapped to extraordinarily low levels. It is an inevitable truism that those in Command and aspiring to Command will do everything within their power to maintain operational effectiveness. Regrettably, what is now needed is for Commanding Officers to stand up, put their careers on the line, and say 'NO, for the sake of our men, we can not achieve this.' It is a terrible reflection on our profession that an SSN has her summer leave brought forward at relatively short notice to allow her to be sent to the Falklands, and this with the specific task of returning with a Patrol Report proving that there was no point in sending her, and that 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 has no budgetary significance.

At the same time cynicism increases as a plethora of glossy publications descend upon ships and establishments, advocating Investors in People or commending the SDR or promulgating some Vision or other, while the pay rise is again staged, and white shirts and steaming boots are unavailable from Naval Stores.

A Service populated by people who are not entirely committed to the Service, for what it stands and for what it has to offer, can only lead to a deterioration of standards, motivation and ultimately ability. And since this is how it is for the Officers, supposedly the more intelligent and motivated stratum of the Service, then it is far worse for the Ratings. The abyss awaits.

And this is where we return to *The Naval Review*. The philosophical points that Alston raises are those to which we, and particularly the Senior Management, should be paying attention and debating ferociously. My generation need to be convinced that the tower is not ivory and that reality has dawned upon the Admiralty. Reflecting on Alston's articles, surely somebody whose elevated position allows them to impact upon the life of those of us further down has an opinion about today's leaders, and are the discussion points about the 3 'R's valid, relevant or complete poppycock?

(At this stage, I acknowledge that Alston could indeed be the First Sea Lord – if so, am I the only one who does not know, since nobody else seems to wish to agree or take issue with his opinions?)

Admiral Hill sums up in his review of the latest *Broadsheet* (April '98) that '. . . if the Navy doesn't blow its own trumpet, no one will' having earlier stated the importance of those outside the Service knowing as much as can be properly told (in this case with regard to the 3TC). *The Naval Review* offers an opportunity for all officers, from Admiral to Midshipman to comment, anonymously if desired, on the realities of Naval Life on the eve of the 21st Century, and to suggest what could be done to change and hopefully improve things. Reading it today, our former serving colleagues must believe that the present is of little concern, that we are all basically content (2SLs PLT says so), and that we have a trumpet worth blowing. Taken in order, it is, we're not and we don't. We have a responsibility to preserve the reputation of the Service and our own integrity by making ourselves heard, just as the Admiralty must confide in their 'greatest asset' and strip off the spin: *The Naval Review*, uniquely, allows us to do this, and do it we must.

BRUTUS

US BATTLESHIP OPERATIONS IN WORLD WAR I

Sir,–Reading Commander Quinn's review of *US Battleship Operations In World War I* by Jerry W. Jones I was bemused by the four times stated claim that the USN contribution to the Grand Fleet in 1917-8 consisted of a squadron of 'pre-dreadnought battleships' and only four of them at that. According to the limited references available to me, the US ships that formed the 6th Battle Squadron of the Grand Fleet included *Florida, Utah* (both 1911), *Wyoming, Arkansas* (both 1912), *Texas* and *New York* (both 1914), all of post-dreadnought design.

The last pre-dreadnought US battleships, the *Mississippi* and *Idaho*, were not available because they had both been sold to Greece in 1914. The next most recent class was the *Rhode Islands* of 1906 whose capabilities would have been quite inadequate to form part of the 1917-8 Grand Fleet.

The review suggests that the US Gunnery and Signalling left much to be desired. I have no knowledge of their Gunnery but have always understood that the grasp of the British Fleet Signal Book by the 6th Battle Squadron was remarkably swift. On the other hand one must note the possibly apocryphal anecdote set out in Jack Broome's book *Make A Signal* – 'When the American Battle Squadron joined the Grand Fleet in World War I, the Americans had great difficulty in mastering our signals. One day when the whole fleet was at sea a signal to turn was hoisted. When it came down the British ships turned one way, the Americans the other. The USN Admiral Rodman turned to rend his aide, who forestalled him with "Sorry Admiral, I guess I told you wrong." This has since been quoted as an example of the perfect relationship between Admiral and Flag Lieutenant.'

I also find it difficult to believe that 'bilateral co-operation was complicated by the fear that Britain might conclude an unfavourable peace with Germany, leaving the US to struggle on alone.' In the light of the tremendous boost to morale resulting from the US entry into the war and the sheer political impracticabilty of Britain's conducting unilateral peace negotiations without bringing in other Allied and Empire governments, it is hard to accept this suggestion.

It is also stated that these US pre-dreadnoughts were 'entrusted with convoy escort duties to Scandinavia'. I am not entirely sure that we were running any convoys to Scandinavia at this time but, if we were, it is hard to envisage the threat with which these vessels were meant to deal. By then any surface threat would have been most unlikely but, had it arisen, a pre-dreadnought battleship might have been of limited effectiveness but perhaps a bit more than if the threat had been from submarines.

D. E. BROMLEY-MARTIN
CAPTAIN, RN

RELICS

Sir,–It is excellent news (*NR*, Oct '98, pp. 287 and 372) that the foretopsail of HMS *Victory*

is to find a permanent place of exhibition. Might this inspire a comprehensive register of the scattered relics of our naval heritage? I recall being shown a piece of *L'Orient*'s topmast, at that time (some fifty-odd years ago) in Milford Haven's principal church. It would be very good to have an authoritative listing of all such *disiecta membra* (which may perhaps include a proportion of True Cross items), with some indication of how they came to be where they now are.

JOHN LAWLOR

Book Reviews–II

CUNNINGHAM – THE GREATEST ADMIRAL SINCE NELSON

by JOHN WINTON
(John Murray – £25)
ISBN 0 7195 5765 8

As commanding officer of the present *Gloucester*, the successor to one of Cunningham's favourite cruisers, sunk off Crete in 1941, I remembered every time we came into Portsmouth that ABC had been buried at sea in 1963 off the Nab Tower. Many naval officers of my generation recall him as the most tangible link they have to a true fighting admiral (even if they don't exactly recall the details outside Taranto, Pedestal and Matapan); the fact that he was Sir Jock Slater's great uncle and that he authored, with 'Taffrail', his own monumental autobiography, *A Sailor's Odyssey*. That latter factor may until now have deterred most potential biographers from dealing with the subject. The full title of the book, *Cunningham – the greatest admiral since Nelson* is a challenging, eye-catching, but worthy, claim for an officer whose brilliant career and commands spanned fighting in the Boer, First and Second World Wars. It is certainly quite the best essay subject for a Young Officer's journal article I have seen for some time.

ABC's professional life started during the doctrinal distortion which characterised the Royal Navy after a century of maritime dominance and complacency. As Andrew Gordon has so cogently argued in *The Rules of the Game*, the Victorian and Edwardian navy carried into the First World War a dogma based on a misinterpretation of Nelsonian principles. ABC exemplified a return to the doctrinal purity of the Nelson era and came to typify the Royal Navy's reassessment of itself in the inter-war years. His approach even in his early years represented a reclaiming of those principles and his subsequent success is a testament to his diligent and exact application of those lessons learned. However, ABC was not by nature an innovator, as evidenced by his frequent rejection or stalling of new ideas, including, notoriously, radar and carrier based aviation. The book catalogues, with some precision, his almost dogmatic resistance to air power at sea ('it'll be quite different when the guns are firing at them, they'll never come as close as that'). Needless to say, his experiences with the Italians and Germans in the Mediterranean and the triumph at Taranto changed his perspective, although as late as 1942 he was still favouring land based against carrier air.

Thus, the comparison with Nelson is an interesting one, not only because ABC achieved great success against the odds and in the Nelson style, but also for a more subtle reason. One theme which I was surprised that John Winton did not pick up and develop, considering the Nelson comparison, was that ABC's correspondence and directives were characterised by direct and extensive culls or cribs from Nelson's letters and an intimate knowledge of his life. Someone on his staff or ABC himself skilfully and consistently inserted plagiarised Nelson tags at every opportunity to inspire and reinforce his message. As they are used during his early time in command of *Scorpion*, it was probably ABC himself and this close association with his role model, I believe, lies at the heart of any understanding of ABC.

John Winton has used his famous narrative skills, his easy talent for telling a complex story clearly and an exhaustive trawl through the sources to produce a fast-moving, compelling story, the bulk of which quite rightly deals with the great struggle in the Mediterranean in World War Two. He steers between the dense prose of *A Sailor's Odyssey* and the magisterial, analytical sweep of Correlli Barnett's *Engage the Enemy More Closely*. What delights, in particular, is his trademark use of telling and distinctive anecdotes and comments, especially those drawn from personal memoirs and letters. I had never realised the constant creative tension which existed between ABC and his staff, the frequent rows and recriminations, under pressure and after tactical errors, and his frequent dismissal of 'pusillanimous buggers' who counselled caution. Severe, demanding and ruthless, he was intensely

loyal, charming and inspirational to those he or the enemy had tested, even when his ships, his people and he himself faced seemingly overwhelming difficulties. Duty indeed was the great business of a sea officer – one of ABC's (and, of course, Nelson's) favourite aphorisms.

Indeed, what runs like a thread through the book is how, as Power on his staff said, 'ABC was always at his greatest in adversity' and this must be the true key to his or anybody's greatness. Here is a catalogue of formidable obstacles overcome, grievous losses sustained and uneven support from a government distracted by other large issues and headed by a Prime Minister always anxious to interfere at distance in naval matters. ABC was always short of air cover and reconnaissance, timely intelligence and protection against large Italian and ruthlessly effective German air assets, with Churchill believing only in the 'paper strength of the Italian Fleet', and had critical joint campaigns in Greece, Crete, Italy and North Africa to sustain. He established a moral ascendancy over the enemy at every stage, such that his dogged insistence and iron will, in particular during the evacuation of Crete ('three years to build a navy, three hundred years to build a tradition') and the support of Malta, were decisive.

ABC's life and career are a model for what it takes to succeed in combat and command at all levels. As such, ABC is the only modern commander who can claim parity with Nelson in the significance of his career, achievement and residual influence. This excellent and entertaining biography will reintroduce a new generation to Cunningham as a major inspiration and exemplar (BRNC and JSCSC please take note!). It is also a timely reminder of the continuing central importance of will, intuition, aggression and resourcefulness in complementing sound doctrine, amid the over-intellectualised and digitised processes of modern combat aspirations. This book will certainly come to sea with me next time – and, of course, it's worth remembering that ABC is still out there off the Nab Tower, weighted down with those six-inch shells . . .

CHRIS PARRY
CAPTAIN, RN

PERSPECTIVES ON AIR POWER
Air Power in its Wider Context

Edited by
Group Captain STUART PEARCE RAF
Director of Defence Studies (RAF)
at the Joint Services Command and Staff College, Bracknell
(The Stationery Office 1998 – £15 (paperback))

It would be dishonest to deny that when I read the Editor's postcard accompanying this volume, admitting that he'd been casting around for a reviewer for this substantial tome and that the finger in the sky had picked on me, I wondered how I'd upset him. I should also admit that the CVA01 vs F-111 battle was being fought out just before I joined the RN and I've never forgotten Chapman Pincher's tales of skullduggery (did they really move Gan on their maps to justify their case?). I have tried very hard to put my prejudices behind me, but this book was, I suspect, put together in the shadow of the Strategic Defence Review and, possibly, at the time when *The Times* was running the 'Do we need a separate Air Force' argument. As published, it is primarily a Staff Course student's primer on the RAF case, including its very *raison d'être*, and hence is essentially partial, which does not help me maintain my objectivity.

Perspectives on Air Power consists of 364 closely argued pages that show little sign of having been edited with the object of making the contents accessible. Every page has the book's title at the top – whereas the chapter's title would have greatly helped anyone trying to find a specific topic, and there is no footnote policy – chapters vary from having none to over 200, with one page being 50/50 text and footnotes. My final gripe is with the Editor's prose – he overuses words such as 'stasis' and 'paradigm' (three times in one page!) that encourage one to reach for the dictionary to check if he's using them correctly in the context (he is).

However, more than enough criticism of the medium, what about the message? Gp Capt Pearce produced *Perspectives on Air Power* from a series of workshops held in the Centre for Defence Studies, London, during 1997. After his introduction, there is a precis of each

chapter, an (incomplete) glossary, the body of the text and finally short biographies of the authors. He has divided the book into three parts – Political Context, Technological Context and Military Context, with each part being subdivided into four chapters, each written by a different author.

'Political Context' starts with 'Threats and Challenges in the UK's Security Environment', emphatically not *to the UK's Security*, as Professor Clark's contribution makes clear that the UK is safer now than for many years, but that the choices facing defence planners are, consequently, much more difficult. The fact that the problems of 'projecting small detachments of air power into distant parts of the world. . .' can be discussed without any mention of sea-based air power well illustrates the narrow focus of this whole book. I could give many more examples. Professor Clark's chapter is followed with chapters on 'Air Power and aspects of Civil-Military Relations', 'Coalition Operations' (by Gp Capt Peach) and 'Air Power and International Law' by Dr Kyriakides, an independent academic. This last chapter, one of the most readable and balanced in the book, is the 'footnote-rich' one that I referred to above. Unfortunately many of the footnotes have to be read to get a full understanding of the text and should, I believe, have been incorporated. Nevertheless, this is a chapter that I would wholly recommend to all Members of *NR* – Dr Kyriakides lucidly covers all the ins and outs of the use and ownership of airspace, its relationship with UNCLOS and discusses the unresolved question of where airspace ends and space begins. The only minor criticism is that I would have liked something on the legalities of operating aircraft from ships.

The other chapter that I would heartily recommend is Wg Cdr Foster's on 'Air Operations and Air Logistics' in the 'Technological Context' section. This is a plain man's guide to the importance that we must all place on logistics and it's written in plain man's English – hurrah – 'The nature of fightin n'stuff – Stuff includes fuel and things that go bang, but also serviceable parts for the weapon, and personal kit for its operators.' This is good tri-service basic principles and Wg Cdr Foster delivers the message well.

Overall, I would not recommend *Perspectives on Air Power* to *NR* Members. The very title is misleading – it should be *Perspectives on Land-based Air Power.* The text is, mostly, too clever for its own good, by which I mean so carefully crafted and closely argued that there is no pleasure in the reading. Read the two chapters I've recommended if you come across a copy, otherwise only read it if you're at Bracknell, where you'll probably have to!

ANDREW WELCH
COMMANDER, RN

SPLASH ONE – THE STORY OF JET COMBAT

by IVAN RANDALL
(Weidenfeld & Nicolson – £20)
ISBN 0 297 81852 X

Whenever I see a book which contains historic episodes to which I myself was a witness, I always check the bits I know about first to see how well an author has distilled the facts. Ivan Rendall's description of the Falklands air war engaged my attention immediately and this celebration and critique of air combat in the jet age deftly combines perceptive analysis with an absorbing, brisk narrative. Its particular strength is to explain technical innovation – why are swept back wings needed? – and complex issues simply, allowing layman and professional alike unique insights into the elite mentality of the fighter pilot and his/her discipline.

As you would expect from an accomplished journalist, his reportage of events is precise and his contextual material from the Second World War to the Balkans in the 1990s vividly explains and justifies the operational and tactical factors at stake. His chapter-long descriptions of the wars in which jet aircraft have been involved are among the best short syntheses I have read on the subjects. Above all, the book is a mine of lessons (and, by association, doctrinal evidence) for the practitioner, not only in the cockpit, but also for commanders and planners, slipping effortlessly from the large issues to the anecdotal episodes at the cutting edge of combat.

His analysis of the use and abuse of air power from the Korean war to the present day is both penetrating and provocative. The crisp description of the use of technology and air power to oppose mass in the Korean war through an air superiority and fighter bomber approach is nicely juxtaposed with the muddled strategic thinking and limiting rules of engagement of the Vietnam war (Rolling Thunder) which blunted US air power. Air power when used delicately is rarely effective, particularly when, once advantage has been achieved and the enemy is starting to hurt, the pressure is relaxed. As he explains in graphic detail, this lesson has not been lost on the Israelis, whose operational use of air power continues to explore the whole envelope in terms of innovation and resourcefulness, or the US in the Gulf war where Rolling Thunder became Instant Thunder (and instant success).

Central themes which emerge in this book are that one should aim for even the merest edge of technical or performance superiority and then combine it with a highly competitive, aggressive moral component. However, that technical superiority has been useless when employed by those not trained or prepared to exploit it, as successive Russian analysts have found after viewing the performance of their export equipment in the hands of others. Strength should be exploited ruthlessly and weakness covered by compensating tactics or systems. This has to take place within an operational concept which emphasises innovation, sortie rate and the relentless focus on the strategic and operational goals of a campaign, even in the face of initial and potentially debilitating tactical setbacks and losses, such as the Israelis sustained in the opening two days of the Yom Kippur war in 1973.

I felt only two regrets, which scarcely detracted from my enjoyment of the material. One was the lack of maps, which would have enhanced my understanding of events and issues, and the second was the journalistic style of writing, itself a strength, but I missed the first-hand detail from the cockpit. It is an antiseptic approach which separates the reader from the clenching claustrophobia of the cockpit, the raw immediacy of combat and the distinctive smell of burnt aviation fuel. However, one Korean war anecdote about a Sabre which had run out of fuel is priceless: 'Risner told his wingman to shut down his engine. Then he flew right up behind the stricken Sabre and put the top of his nosecone against the bottom of Logan's jet-pipe and started pushing him. They crossed the coast and headed out into the Yellow Sea. . .'

This is a very readable book, festooned with fascinating detail and anecdote, which will appeal to the ejector seat enthusiast and armchair layman alike. Its broad scope allows modern doctrine to be assessed against the lessons of the past and I discovered several lessons which have been lost to the corporate memory. It will enable a whole generation of aviators to talk knowledgeably, endlessly and authoritatively about their profession and represents a useful and timely injection of corporate ethos. Indeed, I suspect that it is the ideal manual for anyone wishing to bluff their way in the bar at Yeovilton or, more easily as you would expect, any RAF station. It is an ideal reference book to dip into regularly and an entertaining companion for a long journey by train or, as in my case, by aeroplane.

C. J. PARRY
CAPTAIN, RN

CARRIER COMBAT

by DAVID WRAGG
(Sutton Publishing – £25)
ISBN 0 7509 1397 5

This is a broad over-view of aircraft carrier operations from 1914 to the Gulf War in 1991, but besides the broad brush approach it covers in considerable detail the major actions such as Taranto and Leyte Gulf, and minor ones including the FAA raids on Petsamo and Kirkenes in July 1941.

The book is divided into six parts, in which each chapter, of the total of 43, is divided into four sub-sections – *Background* to link into the general war situation: then *Ships and Aircraft*; *The Action*: and finally *Comment* to sum up the operation and criticise it where appropriate. Included in each chapter are personal recollections from men who were there.

Part one takes us to 1939. Part Two covers the *War in Europe* until December 1941.

Included are Norway and Mers-el-Kebir: and in considerable detail the FAA attack on the Italian Fleet in Taranto in November 1940. The Japanese attack on the American Fleet at Pearl Harbour on 7 December 1941 was based on this action – Japanese Naval Officers having visited the Italians to discuss this operation. Other actions described are the Pedestal convoy to Malta, Cape Matapan and the sinking of the German battleship *Bismarck.*

Part Three is *Japan on the Offensive*, starting with Pearl Harbour, leading to the Coral Sea and Midway via a number of smaller operations, but including General Doolittle's raid on Tokyo. This was a unique case of large B-25 Mitchell bombers being carried on and launched from the flight deck of USS *Hornet*, but because they could not be recovered they had to continue to a Chinese airfield.

Part Four, *The Allies seize the initiative in Europe*, starts with the North African landings and goes, via Sicily and Italy to Operation Dragoon, the landings in the south of France. Overlord is not covered since carriers were not involved.

Part Five, *Taking the War to Japan*, describes the leap-frog advances through the Pacific, and in detail the major battles of Midway, the Philippine Sea and Leyte Gulf, concluding, up to August 1945, with Kamikaze attacks.

Part Six, *Carrier warfare in Peace*, brings us up to date with good accounts of Korea, Suez, Vietnam, the Falklands and the Gulf. Korea was fought with essentially WWII aircraft and carriers; Suez with first-generation jet aircraft and helicopters; and Vietnam, the Falklands and the Gulf with later designs of aircraft operating from modern carriers.

The book is liberally illustrated with a large number of photographs from many sources including an insert of 37 very good colour plates – another of Sutton's large format, well produced books. Altogether excellent – recommended to everyone interested in Naval Aviation.

JOHN R. P. LANSDOWN

(Editor's Note: Sadly, John Lansdown died in December 1998. He was a prolific writer and reviewer on naval aviation matters. He will be much missed.)

UP TOP: THE ROYAL AUSTRALIAN NAVY AND SOUTH EAST ASIAN CONFLICTS 1955-1972

by JEFFREY GREY

(St Leonards, NSW, Allen and Unwin in association with the Australian War Memorial, 1998 – Aus$59,95)

The Royal Australian Navy has seen many changes and one very significant transition since the end of the Second World War. The changes are too many to tell here but the transition has been from being a Navy whose main association was with the Royal Navy at the beginning of the period and with the United States Navy by the end. Aspects of this were inspired by the influence and contiguity of the USN during the Pacific War but the trend continued in policy after that with the final polish to the new alignment being given by the Vietnam War. It is with the dominating operational activities of the bare two decades of the title that Jeffrey Grey is concerned.

This is a book dealing with conflicts economical and strategical – the constant fight to maintain naval capabilities against shrinking or, at best, static budgets and the pervasive influence of the Cold War, on one hand suggesting Australia maintaining a relatively large fleet of blue-water capabilities and on the other the regional, less high-intensity type of warfare actually fought in the Malaysian and Vietnam areas. The former saw a war in the 1960s of relatively low intensity, of a premium placed on patrol craft despite the nominal power of the Indonesian Navy. One of the interesting discoveries was that a coastal minesweeper although outgunned by its nominal opponent was often a useful deterrent. In this, the Australians worked principally alongside Malaysian and British forces, and played a part in the training of the infant Malaysian naval service. They were thoroughly integrated and did well, but this was to be a difficult though less high-paced conflict than the next one.

Australian involvement with the Vietnam War began in mid-60s whilst Confrontation was still active. Here, perhaps, larger policy issues were concerned and the political dimension was more prominent. Australian naval involvement took a number of forms:

trooping and other logistic support, destroyer deployment, an in-country helicopter flight and a clearance diving team. These activities are the main subject of the book. The aircraft-carrrier *Sydney* took on a new role as a troop transport and fast logistic ship, possibly prolonging that ship's in-service life but without affecting the eventual outcome of the naval aviation debate – which was lost at least as far as carriers were concerned.

The greatest part of the Australian activity was probably the contribution of one destroyer at a time to the US Seventh Fleet. Largely, these were the American built DDGs and these had a very active time, usually as part of TF115 whose main task was coastal surveillance. This was a largely successful activity, forcing most of the Viet Cong logistic supply on to less efficient inland routes. But Naval Gunfire Support was a priority task, too, and many guns were fired to barrel life limits. Commonality of spares and stores with American systems made life easier, although one deployment was undertaken by the Daring class *Vendetta* with consequent difficulties. One unfortunate incident was *Hobart* being damaged and sustaining casualties by a Blue on Blue Sparrow missile.

But the most intense involvement in the war was almost certainly by the RAN Helicopter Flight, which was fully integrated into a US Army formation and a team of clearance divers. The former flew entirely in country in support of the land war using Huey gunships and 'slicks' – troop carriers and suffered accordingly. Not only did they take the brunt of Australian casualties but they also flew very intensively – well over 100 hours a month – which was very much more than the performance put up by the RAAF. Although the diving team were obviously heavily employed in anchorages on Operation Awkward work, they were also to be found inland, too. One of the book's best uses of its many photographs is in showing a sequence in which this team successfully cleared a canal obstacle erected by the Viet Cong.

Grey's book is well researched, clearly written and is very much a model in producing what was asked of him. An important question, however, concerns the balance between the personal slant and the colder factors. No one should be forced to follow Hinsley's lead in official histories – no monsters, no heroes – but perhaps here the balance has swung rather far in the opposite direction. An example of this is the space devoted to medals for only one of the three wars in the volume. This is nevertheless a handsome, informative volume and good value, too, which tells much about the problems of working in a location distant from home in support of a greater power. It also makes it clear what some of the messy reality is, which underlies any such conflict. Nevertheless the Royal Australian Navy can take much pride in its achievements and these are well chronicled in this book.

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

THE WRONG WAR – WHY WE LOST IN VIETNAM

by JEFFREY RECORD
(Naval Institute Press – 1998)

As I have to confess that the Vietnam War is not in any way my specialist area, my eye was caught initially by the remarkably stark and angst-ridden full title of this book, which came across more as a slightly gauche attempt to attract attention. However, Record is an author of real note, as he reveals in the research, scope, analysis and depth of effort that clearly went into this book. Sensibly and logically laid out, it starts with a twelve page introduction that is actually a neat synopsis for the whole book. Clearly very thorough, Record is certainly a perceptive commentator who pulls no punches. Strengthening his credentials, he also has the benefit of actually having fought there as a member of a psychological operations unit. In spite of this impressive intellectual effort, however, the book left a curiously neutral impression. The plain fact is that I think that the Vietnam War has little hold over anybody else other than a particular generation of Americans, now amortised by time and the spectacularly clinical display in the Gulf War. To be fair, I can understand that those who actually fought there, especially those with a keen mind, might want to open the matter up more, if only

to satisfy themselves, and the book does however contain some earnest and hard hitting truths; three in particular are worth highlighting here briefly. The first was the quite scandalous catalogue of errors, weaknesses, failures and misjudgments that both civil and military administrations made, even by otherwise highly respected and able men like Kissinger; it is the scale and the frequency that is frightening, particularly when many of those in political and military command had experience of successful campaigns in World War Two and Korea. Second is the effect the War had on the USSR, something I had never previously considered before. For them, it was a win-win situation, sapping US military power and draining political support from the American public whilst helping to convert the Vietnamese ultimately to become a Soviet communist power as opposed to a Chinese communist one, an important distinction for the USSR aiming to contain Chinese influence. Finally and most significantly, is the crucial importance of the intellectual aspect of warfare – obeying the principles of war, determining the appropriate doctrine and keeping to it which underpins any military performance. When I started reading the book, I could only half remember a quote (it turned out to be by Clauseswitz) that for me sums up the Vietnam War and Record kindly provided it for me early on which, in a nutshell, states that the key judgment for any leader is to correctly establish what kind of war is to be fought and then fight it accordingly. This is Record's main point – not so much that the US war policy was flawed but that the US failed to recognise that it could only win by measures that were never entertained due to their magnitude, a land invasion of North Vietnam or an unrestricted air attack on its population. Had the US looked at Vietnamese history and then correctly and honestly analysed the situation, they would have realised that, for the Vietnamese, this would be a fight they could not or would not lose, much as the almost constant defence of their country from Chinese aggression had been a perpetual struggle. This had generated a commitment to fight that the US, who viewed this narrowly as an important test case to erode 'creeping communism', would never ever want to match. In short, despite the military imbalance, the Vietnamese would fight harder and longer, no matter the cost, something that the US only truly confronted very late.

I would recommend this book without reservation to students of the Vietnam War and to those with an interest in the grand strategic level of warfare for a critique on an excellent example of how not to do it, and I would suggest that there are probably fewer better works in this respect. For those with a primarily maritime interest in warfare and history, a thoughtful read of the introduction will convey the essence, flavour and erudite feel of this worthy book.

AIDAN TALBOTT

COUNTERPART
A South Vietnamese Officer's War

by KIEM DO AND JULIE KANE
(US Naval Institute Press – $29.95)
ISBN 1-55750-181-5

The Vietnam War conjures up images of B52 bombers and jungle ambushes, of helicopter gunships and napalm, rather than of naval actions, so I looked forward to a book explaining the naval side of the war, especially one co-written by a senior South Vietnamese naval officer. Sadly, it's a bit of a disappointment.

Kiem Do is ironically a native of North Vietnam, born in Hanoi in 1933, and the turbulence of his life mirrors that of his country. That he and his brothers find themselves fighting on opposite sides in the civil war comes as little surprise. The book is something between a racy thriller and a whimsical memoir, the latter perhaps partly because the ghost writer, Julie Kane, is a poet from Boston. They seem an unlikely pairing and the book falls between a number of stools. But for all that, it has some entertaining passages.

By far the most interesting describes the scene in Saigon in April 1975 with the communists rapidly approaching and the South Vietnamese Army running away in front of it. Kiem was by then Deputy Chief of Staff for Operations and, with a small band of

officers, he put together a plan to evacuate the entire South Vietnamese Navy to the Phillippines, taking with them their families and thousands of civilians escaping the red hordes. They got out just in time and reached Subic Bay, where they immediately became refugees and eventually dispersed to various parts of the world. Many, like Kiem and his family, went to America.

Earlier we hear of his time scouting for the Viet Minh and blowing up French troop trains, though this did not prevent him from later being sent to the French Naval Academy at Brest to be trained as part of an elite corps of officers to run the new Vietnamese Navy.

From the mid-fifties onwards, the backdrop is the long drawn out war against the communists and the increasing involvement of the Americans. The title of the book comes from the fact that eventually each key Vietnamese officer had an American 'counterpart'. These relationships can seldom have been easy and Kiem's experiences illustrate the huge gulf in culture, understanding and approach between the two peoples. During his seagoing years, he served in the ship which was used as a flagship by successive South Vietnamese Presidents and their hangers on. They come across as corrupt and ineffective, their administrations gradually crumbling into total ineptitude. Indeed the picture that emerges of South Vietnam through the book is of a poorly organised and badly led country, full of weak and selfish people.

A scholarly account of naval warfare this is not; there is little attempt to put the events in which Kiem was involved into the context of the war as a whole, nor to explain what influence the Navy had on it. But it is an extraordinary story which gives an unconventional slant on that most unhappy period of Vietnam's history.

TIM LAURENCE
COMMODORE, RN

JANE'S NAVAL HISTORY OF WORLD WAR II

by BERNARD IRELAND
(Harper Collins, 1998 – £29.99)

This is a deserving book in more ways than one. It deserves a wider readership than our membership, and it merited better production. There are virtually no margins to the pages and the first impression is likely to be one of a coffee table work with rather generous captions; only after coming to terms with the layout does it become easier to distinguish them from a rich and illuminating text. Readers are warned to persevere and assured that they will be rewarded. There may be no bibliography, the index is skimpy and erratic, and there is a paucity of maps, especially of the Pacific theatres. But most of the pictures have seldom been seen before, and there are few overlaps or repetitions. They have an immediacy, a buoyancy, that brings life to the pages. Ian Drury has done the author proud in their selection. The colour artwork of Tony Gibbons is superb. Textually the book is a tour de force. Go to it.

It begins rather unexpectedly but interestingly, with a brief note on Fred T. Jane, (1865-1916), better known until lately as the first author of those eponymous *Fighting Ships*, which first appeared in 1898, but now the inspiration of a wider range of Service books. The war is covered in six chapters covering only two hundred and fifty pages. The campaign against commerce is rightly the starting basis, and leads to the related assaults against the U-Boats and, largely by the US Navy, against Japanese shipping. These three lead to studies of the development and deployment of amphibious warfare and naval aviation. The last twenty pages review the demise of the battleship, which began the war as the capital ship, a role which it lost to the aircraft carrier, and ended as either super monitor supporting contested landings or else as escort to a carrier task force. Even so, the point is made that despite the emergence of naval air at the battleships' expense, there was still a tendency for British carriers to be regarded as a means of bringing an enemy to surface action rather than as a weapon in themselves.

It points out the teething troubles of their torpedoes among all the major navies except the Japanese, and the fortuitous exchange of intelligence on such matters arising from the capture of *Seal* and the misfortunes of *U-47*

after she had penetrated the defences of Scapa Flow. It brings many of us up to date over the history of *Graf Zeppelin*, the only aircraft carrier built under Hitler's Z Plan, and over Ballard's latest submerged scalp, the location of the sunken *Yorktown*. It combines in nice proportion the strategical and the tactical aspects of the various campaigns, (though references to the Russian forces are minimal), and the constructional and the wider engineering and the armament problems of the various building programmes.

The best thing about the book is the number of thought provoking and otherwise interesting points which it contrives to make despite its relatively small size. How far was Dieppe a compromise to assuage American reaction to the successful British objections to an Overlord in 1942? Was Zeebrugge, another raid, and in the previous war, really 'A fine example of what is something of a British speciality'? How many readers knew that the 'Formidables' had not only armoured flight decks but also armoured hangars against 6" fire, which led to such surprisingly small air groups, compared especially to the *Ark* of that war? And here again is recorded the doubt whether there is any documentary evidence to justify the received definition of the acronymic ASDIC.

And here are but three examples of the telling phrase. When *Rapana* was commissioned as a carrier in 1942, 'the obsolescence of the Swordfish proved a blessing in disguise; few other aircraft could have operated from a flight deck just 126 metres long on a ship capable of no more than 12 knots?'. And 'By 1945 a wealth of assets was seeking a dearth of targets'. And 'Political pressure allowed the Royal Navy to operate alongside the American in the Pacific but the unpalatable fact was that it was neither welcome nor needed. Like a once great actor making a cameo appearance near the end of his career, the imposingly named British Pacific Fleet equated barely to one American Task Group. Its ships were ill-suited to the protracted operations that the theatre demanded and as its fleet train was inadequate it relied on the Americans for support and indeed for replacement when it was not on station'. Rather hard on the efforts of the Fleet Train, but a fair if sad conclusion, well expressed.

K60

THE *BISMARK* CHASE; NEW LIGHT ON A FAMOUS ENGAGEMENT

by Robert J. WINKLARETH
(Chatham Publishing–£20)
ISBN 1 86176 076 0

In the spring of 1941 the noose was tightening around the UK's Atlantic shipping routes; German U-Boats were exacting a crippling toll, and although the *Graf Spee* and some of the armed merchant raiders had been neutralised, the *Hipper, Scharnhorst* and *Gneisenau* were still at large. The prospect of the great new battleship *Bismark* (the author's spelling), and her sister *Tirpitz*, entering the fray must have alarmed their lordships at the Admiralty. The *Bismark* was capable of outgunning any single unit of the RN, and outrunning all but one of the 'heavies'. Once she escaped into the Atlantic the entire Home Fleet would be occupied in tracking her down, and until she was found the convoys would have been entirely at her mercy.

When, then, on 22 May 1941 Admiral Sir John Tovey, Commander in Chief of the Home Fleet, learnt that the *Bismark* and her escort, the heavy cruiser *Prinz Eugen*, had sailed from their anchorage near Bergen, he was in no doubt as to his mission. It was of the utmost importance that he catch them and engage them as they passed through the Greenland Iceland Faroes UK gap (a choke point as familiar and crucial in 1941 as it was throughout the cold war), and that they should be prevented from escaping into the Atlantic.

Robert Winklareth has written a stirring and evocative account of the chase that followed. Already published as a technical author, he has now proved his ability as a most readable historical writer. In his account of the battle of the Denmark Strait he has produced a gripping blow by blow analysis of events which calls to mind Andrew Gordon's masterful narrative of Jutland in *The Rules of the Game* (reviewed *NR* January 1997). Winklareth includes a number of photographs, very helpfully providing their archive references, which

work well in concert with the text. Seeing the battle in its context as one of the great trials of battleship gunnery, he gives a useful background account of the genesis of the battleship, from the 'Dreadnoughts' to the 'King George V' class and the *Bismark*, also tying in the programmes of other major navies. There is also a most informative appendix explaining the principles of naval gunnery as they applied in the 1940s.

There are, however, criticisms of this book, many of them revolving around the subtitle 'New Light on a Famous Engagement'. Winklareth has, frankly, shed very little light, and that which he has (the unsurprising assertion that the German ships attempted to open the range at the beginning of the engagement) has been substantially blurred and diffused by some other very dubious assertions. The addition of footnote referencing, of which there is none, might have done much to strengthen his arguments. In attempting to analyse Admiral Holland's intentions his contradiction of such historians as Roskill and Barnett does little for his credibility.

In conclusion, then, Winklareth has written a gripping and largely factual account of the hunt for the *Bismark*, backed up by some solid scene setting. What he has not written, however, is a seminal or revisionary history, and nor has he, to quote his epilogue 'done much to resolve the remaining questions about the battle'. Sold as a good read, at its reasonable price, it could be given a good review, but sold as it is as a historical work, the book does have glaring deficiencies; buy it, read it, enjoy it (as I did), but do not rely on it as a source.

G. D. FRANKLIN
LIEUTENANT, RN

THE SAME WIFE IN EVERY PORT
by SUZANNE KYRLE-POPE
(The Memoir Club, 1998 – £14.50)

The public record of the navy, for very understandable reasons, is extraordinarily masculine. Wives feature but sparsely in the memoirs of the great, usually playing the 'brave little woman' role, the home-maker, official cocktail-party conversationalist (provided she doesn't presume to join in the all-engrossing 'shop') and always 'there for me when I get back'. Joy Packer's *Pack and Follow* was a long time ago and a rarity.

But this is something different. I do like the title. Faithful though we all are, there may perhaps be some followers of 'A Theory of Port Visits' (*Naval Review*, July 1976) who might have mixed feelings should *their* ginghamed bride be hopping and waving on every foreign jetty as the ship berths. But having read this book, one can but say, 'lucky Michael'.

Suzanne is the daughter of Admiral Sir Geoffrey Layton, sometime WW1 submariner, C-in-C China Station and, by the end of WW2, C-in-C Portsmouth. Raised thus in a service family which comes across as oppressively anchor-faced, she is entirely frank about her unpreparedness for escape into a first marriage with an army officer, the disastrous honeymoon and the final failure.

As a teenager, her first 'foreign' was Malta in 1938, her father being second in command of the Mediterranean fleet, the family following in due course to Alexandria. She must have kept a diary – the accounts of her growing up, her thrill at being 'abroad', the fun of the Malta fishing fleet, are written in a charming and humorous style, full of character sketches and with contrasting asides that report the menacing approach of war.

Married into the Devonshire regiment in Malta, Suzanne witnessed and took part in the siege, being bombed out of her home, working as a cypher clerk and eventually being evacuated by Wellington bomber. She made friends amongst the 10th Submarine Squadron and grieved with others as many failed to return from patrol.

She met Michael Kyrle-Pope, whom she had known previously, on his return from prisoner-of-war camp and they were married in 1947. Thereafter she packed and followed around the world – to the USA, early post-war Germany, the Far East – there's a substantial account of Michael's tour as SNO Persian Gulf, based at Bahrein in the heyday of the '60s – Singapore and Borneo again, and eventual retirement to 'a new era . . . full of opportunity for travel of a different kind'.

Sharply perceptive writing reveals an energetic and enterprising woman, full of curiosity, afraid of little, who has cultivated a wide acquaintanceship amongst many nationalities and who has suffered the usual unhappinesses that families get themselves into. It's an interesting picture of an age that has now disappeared, one in which it was important to be British and to maintain the required standards. It is also great fun to read – I laughed out loud. Highly recommended.

G. F. LIARDET

THE FOUNDATIONS OF NAVAL HISTORY: JOHN KNOX LAUGHTON, THE ROYAL NAVY AND THE HISTORICAL PROFESSION

by ANDREW LAMBERT
(Chatham – £30)
ISBN 1 86176 086 8

Look up almost any pre-1900 naval worthy in the *Dictionary of National Biography* and you will find the entry signed 'JKL'. They were the initials of John Knox Laughton, the central subject of this excellent book.

Laughton wrote about 900 such entries (some three per cent of the entire *DNB*) and that alone gives some idea of the Protean nature of the man. You can see it in his photograph on the front cover: composed, authoritative, determined, able and willing to take on mammoth tasks and carry them through in true Victorian fashion.

He was by education a mathematician, a Cambridge Wrangler, who entered the Royal Navy as an Instructor and distinguished himself in action at Fatshan Creek in 1857. By the mid-1860s, however, his published work on surveying and meteorology had marked him out as a potential teacher at the Royal Naval College, and it was there – first at Portsmouth, then at Greenwich – that he served for the next 20 years. During that time his attention moved away from material sciences towards history: but he was always greatly concerned to impose 'scientific' rigour on both his own research and on those he sought to influence.

As Andrew Lambert shows, the people whom Laughton influenced included all those whose names later became associated with nineteenth-century naval study and theory: in Britain the Colombs, Bridge, and later Corbett and Richmond, and in the USA Stephen Luce and Alfred Thayer Mahan. Previously, written naval history had consisted mainly of chronicled narrative, with a large dollop of heroic British actions, and had acquired a distinctly romantic tinge. Now under Laughton's leadership it was to be subjected to much more searching examination, wherever possible from primary sources, and subsequent analysis – as the basis, Lambert persuasively argues, for sound doctrine.

After his retirement from the Royal Navy in 1885 Laughton continued his researches (he was a prime mover in arranging public access to naval documents in the Record Office) and did his main work for the DNB. But he also did much to harness the navalism of the 1880s and the Naval Exhibition of 1891 owed much to his organising ability. Réclame however was not his forte, and he was always sceptical of alarmist rhetoric, so that the excesses of navalism were not for him; 'harness' is the right word. In the same way, although recognising the force of Mahan's books and their immense influence on the public, he did allow himself some reservations as to the limits of Mahan's sources and the American's selection of evidence that best suited his thesis.

That was not Laughton's way (except possibly in the matter of Nelson's conduct in 1798-9, where he was concerned to admit no professional taint to the hero). His general philosophy was underlined by his foundation of the Navy Records Society in 1893, perhaps his most enduring achievement. The Society was formed to publish verbatim, authentic documents on suitably grouped subjects, the editor of each volume to be meticulous in preparation and to provide an explanatory introduction. The Society flourishes to this day, having published 140 volumes, and serious researchers in naval history can never neglect to consult those that are relevant for their period.

Laughton continued to be a respected, even revered figure, reviewing constantly, lecturing frequently, and consulted widely by senior officers and academics alike. He had held a lectureship at King's College, London since

1885, and this was one of the bases from which he worked, though he was unsuccessful in his attempt to found a Department of Naval History there. He was knighted in 1907. He died, full of years and honours, in 1915.

Why then is this magisterial, influential figure so little known? Andrew Lambert goes far towards explaining why in the later stages of his book. Laughton's own rigorous standards seem to have led to a kind of academic modesty which would never claim more results than it could substantiate. Thus – and I may be going further than Lambert here – his output tended to be self-limited, confined to specific topics, seldom extrapolating in the way that (for example) Mahan did with such effect. Put another way, his analysis was outstanding, his synthesis somewhat lacking. It is notable that no coherent book-length study of naval history stands under his name although his collections, articles, reviews, lectures and papers are legion.

Lambert has been faithful to Laughton's tenets in his preparation of this book. It is wondrously well researched, and places JKL perfectly in the middle of the arena in which he worked. One hesitates to use the offputting word historiography, and I would rather say it was a major contribution to history: and in writing it, Andrew Lambert has restored his subject's reputation.

RICHARD HILL

SEARCHING FOR THE FRANKLIN EXPEDITION

by ROBERT R CARTER, edited by H. B. GILL and J. YOUNG
(Naval Institute Press, Annapolis, 1998 – £29.95)

Sir John Franklin and his ships *Erebus* and *Terror* were last sighted by two British whalers in the final week of July 1845 in the northern part of Baffin Bay as they headed towards Lancaster Sound. Sir John had intended to locate a channel connecting the 74° latitude sound discovered by RN ships since 1818 from the east and the 68° latitude sound traced by Thomas Simpson and Peter Dease of the Hudson's Bay Company in 1839 from the west. If it existed, this would be the final link of the NW Passage between Atlantic and Pacific through the Canadian Arctic archipelago. When no news was heard of him by winter 1848, the Admiralty initiated a search by sea which resulted in geographical discoveries of great importance over the years. Many books have been written about these voyages, mainly reports by the Commanding Officers of each individual voyage, parliamentary reports, and, later, 'potboilers'.

But in the last twenty years or so, diaries written by other officers have been dug out of attics by descendants, edited and published. The book under review was written by a young American officer and covers the years 1850 and 1851.

In 1850, a large body of searching ships was directed towards the Lancaster Sound/Barrow Strait area, as follows. Commodore Horatio Austin commanded a squadron of four ships, the *Resolute*, his own ship, and the *Assistance*, Captain Erasmus Ommaney, heavily built sailing vessels, and *Pioneer*, Lt Sherard Osborn, and *Intrepid*, Lt Bertie Cator, screw steamers, schooner-rigged. Old Sir John Ross commanded the *Felix* with a yacht, the 12-ton *Mary*, in tow. Lady Franklin equipped her own ship, *Prince Albert*, a hermaphrodite brig, which was commanded by Commander C. Forsyth. Last, there were two American vessels joining the search, the *Advance*, Lt E. J. De Haven, who had been with Wilkes in the Antarctic and was therefore the Commodore of the American squadron, and the *Rescue*, Acting Master Samuel P. Griffin. Both were diminutive brigs, poorly fitted out compared to the British ships, and with small crews. They were sponsored by the US Government and financed largely by the New York merchant Henry Grinnell who had been urged to do so by President Zachary Taylor to whom Lady Franklin had made a personal appeal.

The standard story of the voyage of the two American ships was, in fact, written, not by De Haven, but by the surgeon on board the *Advance*, Dr Elisha Kent Kane, in a book entitled *The US Grinnell Expedition in Search of Sir John Franklin, a Personal Adventure*, published in 1854 in New York. Appendix B of the book contains De Haven's official report of the American Arctic Expedition,

dated 4 Oct 1851, addressed to the Secretary of the Navy. (The latter must have been very impressed because Kane was put in command of the next American search expedition which was despatched in 1853.) So the book under review is very much a personal journal, much shorter than Kane's book, and not intended to be read by anyone other than Carter's own family. In the first half of the book he tells us a lot about the details of life onboard and his private opinion of the ability of his superior officers. The cabins were small and almost devoid of heating and he was keeping 'Watch and Watch' with a junior officer most of the time. When they reached Lancaster Sound and met the British ships on 22 August his account becomes particularly interesting. Some of Austin's ships had already found some articles on the shore at Beechey Island which were clearly connected with Franklin but no message had been located. Carter thought the British ships were large and comfortable and compared favourably with his own 'dirty little brig'. He liked Captain Ommaney and thought Bertie Cator 'a capital fellow'. The ships helped one another as they dodged the packice and the icebergs, and searched the shore at likely harbours. The graves of three of Franklin's men were discovered on Beechey Island – a drawing of the scene appears in Kane's book. The cairn built by Franklin on the summit of Beechey Island was completely dismantled to try and find any message but without success. The Americans sailed part of the way up Wellington Channel before being stopped by the ice, and then went westwards almost to Griffiths Island where they were again blocked. Beset by the ice they were slowly swept to the east out of Lancaster Sound into Baffin Bay as the winter closed in, separated from the British ships who were, except for the *Prince Albert*, prepared to spend the winter there. The officers and crew of the *Rescue* moved on onboard the *Advance* which was made slightly more comfortable. During the drift Carter records various encounters with polar bears and narwhals, and the sighting of many birds flying north in the spring, but the entries in his journal become briefer and sometimes non-existent. Carried south and to the east they eventually reached the coast of Greenland around Latitude 65° at the end of May by which time the weather was warmer and open water encountered. The crews were back in their own ships by now. The decision was made to turn north again. They reached Upernavik, were stopped by the ice, met several British and one American whalers, and went ashore in some of the villages, as they had done a year before. In August they met the *Prince Albert*. Forsyth had sailed her home in 1850 and Lady Franklin had sent her out again in 1851, this time under the command of Mr Kennedy, with an old whaling skipper, Leask, as Ice Master. The three ships were in company for nearly a month. De Haven, Kennedy and Leask discussed the situation. Kennedy said he would try the Middle Ice but De Haven, realising it was another bad season for ice, decided to head for home. On 17 August they turned south and were back in New York by 5 October 1851.

The fascination of this book is in the different style of writing compared to similar English books of the same period, and an account of an important year in the Franklin search seen from a fresh point of view. It has Notes, a Glossary, a Bibliography, an Index, eight photographs taken later, six drawings, four maps and a photocopy of a page of his journal. The Editors have done their best to explain technical terms. Readers of this journal will find some words, such as Dog Watches, well-known, but others, such as Yankee Reefers, interesting novelties. The one complaint this reviewer has is the bad reproduction of the maps which are so small as to be unreadable and without latitude and longitude numbers so that it is impossible to identify the positions which Carter often mentions in the text.

Students of the Franklin Search or of the conditions on board ships in the arctic in the 1850s will be intrigued by this book.

ANGUS ERSKINE

THE PRIZES OF WAR
The Naval Prize System in the Napoleonic Wars 1793-1815
by RICHARD HILL
(Sutton Publishing Ltd in association with the

Royal Naval Museum – £25.00)
ISBN 0 7509 1816-0

Richard Hill's six previously published works have covered such topics as arms control, the law of the sea, maritime strategy for medium powers and anti-submarine warfare. Save for his recent editorship of the *Oxford Illustrated History of the Royal Navy*, this is his first adventure into the naval history of the pre-modern period – defined here as prior to that history which has been made by members of *The Naval Review*.

In his introduction, Richard Hill describes his surprise in finding that this subject had not been covered before. Such a claim to originality deserves checking out; a quick skitter over the keyboards of the Hampshire (particularly the naval section) and Southampton University libraries (admiralty: prize: naval: court:) produced only a few of the secondary works already mentioned in his bibliography of which Lt-Cdr Peter Kemp's *Prize Money* (1946) is probably the nearest, but far narrower, competition.

So the claim is justified. And when one thinks about it, it must be against the odds that a rear-admiral of much seagoing and policy-making experience, with a scholarly bent for history, a charming style with the pen and a sense of humour, should also have been Chief Executive of the Middle Temple, one of the Inns of Court, for some ten years and should have such a wide friend and acquaintanceship amongst the legal and curatorial professions.

The results show in Richard Hill's impressive list of primary and contemporary sources which he uses not only to explain events but to deduce the characters of the writers. There were no typists in those days. A major figure is Sir William Scott, Lord Stowell, Judge of the High Court of Admiralty, whose fair, forceful handwriting complements the ripe wisdom of his judgment, while the 'neat writing and concise way of expressing himself' commands confidence 'then as now' in the legal and administrative points made by the King's Advocate, Sir John Nicholl. And what fun to find, on consulting it, that a particular contemporary book on prize law contains the book-plate of an officer of splendour, the Lord Keith, Commander-in-Chief, Mediterranean Fleet.

We are beginning to expose the main thesis. As with Dr Nicholas Rodger's book about the Georgian navy (*The Wooden World*, Collins, 1986), the media stereotype (flogging, weevils, the press) simply will not do; the system would not have worked. Here the stereotype is one of grasping longshoremen, greedy agents and corrupt courts administering international near-piracy to the detriment of the interests of the captors, the silly sailor-folk. Not so; the backbone was the 'Course of Admiralty and the law of nations' strictly administered. The ribs, if you like, were the ways in which prize law and the sometimes very handsome payouts were used as instruments of a farsighted government policy, designed to incentivise lowly paid naval people into discommoding the enemy to the maximum – but yet preserve the social and other sanctions that controlled improper choices between fighting and loot. An island power had to contest a continental one by means of the little battles of cutting out, capture of trade and investment of colonies. The government even paid head money for each enemy sailor killed or captured – not much, but some compensation should the *L'Orient* happen to be worthless by morning.

One of the most successful officers was Sir Edward Pellew (currently being travestied on television in the ineffable Hornblower series) whose prize money over a gallant and energetic career might have amounted to £300,000, equivalent to £60 million today. Patrick O'Brian's cultists will recognise the early career of Thomas, Lord Cochrane in *Master and Commander* – swop *Speedy* for *Sophie* and *Gamo* for *Cacafuego* – and will recall Aubrey's relationship with his agent as well as Mistress Harte's warning, 'Jack, I do beg and pray you will not attempt to make prize of neutrals.' The Cochrane family had their disputes with the Admiralty court; these personalities and others stand out from the page and (but for a glossary) Richard Hill makes no apology for using the language of the day.

'System' is the word for it; the lay reader will be surprised by the regularity that had been imposed by 1793 and the fairness of the administration. Dealing expenses were

properly accounted for; clearly there was a role for the agent, otherwise the war would have ground to a halt with every captor pleading his own case ashore. The average payout on a merchant ship was 81 per cent of the total received at auction. Cargoes were frequently worth many times the hull; penalties for breaking bulk and looting were severe. A very fair price was paid for captured enemy warships, of which nearer 90 per cent went to the captor. One of the several injections of culture in this book will very much please the Janeites, for Richard Hill recalls that Captain Wentworth 'fell in with the very French frigate I wanted' and made enough prize money to marry his Anne. Both of Jane Austen's brothers made post and were fortunate with prize money.

Laid out in a thoroughly logical manner, from operations through legalities, agents, officers of the court, to distribution, attitudes and statistics, Richard Hill backs his conclusions in many ways; by the anecdotal, by following the celebrated Captain Blackwood through The Case That Had Everything – a disputed neutral – and, because all good professional and scientific history writing nowadays needs something of the *annales* school's predilection for *numbers*, by close examination and analysis of a soundly based sample of court records. This is original research indeed.

There is much more in this important and well-produced book. It describes a sophisticated and (in Richard Hill's words) a 'self-adjusting' system which was a prime component of the Royal Navy's success during one of its historical hey-days. A must for the educated book-shelf.

G. F. LIARDET

1797: NELSON'S YEAR OF DESTINY

by COLIN WHITE

(Sutton Publishing in association with the Royal Naval Museum – £18.99)

ISBN 0-7509-1999-X

Oh Lord, Another Book about Nelson, is a predictable reaction in many circles, not least naval ones. And in this year 1999, with 2005 only six years away, anyone is entitled to ask if there is more to be said about the flush of anniversaries coming upon us, and particularly those connected with The Hero, or if it is not a bit of band-waggoning.

I think it is not, for several reasons which will be explained at the end of this review. First, though, the book should be described. It falls into three sections: Nelson's part in the evacuation of the Mediterranean in the winter of 1796-7; the Battle of Cape St Vincent on 14 February 1797; and the attack on Santa Cruz de Tenerife in July 1797.

The first part has as background Nelson's service in the Mediterranean over the previous four years. He had become something of an expert in the middle sea by 1796, and as a Commodore in the *Captain* he had the sad task of supervising the dismantling of so many of the structures he had helped to build: Elba and Corsica as advanced bases, and the positioning of British forces off Leghorn. The story of this evacuation, not the most stirring or well-known passage of Nelsoniana but one demonstrating his mixture of negotiating skills and military decision, is sympathetically told.

Moving on to St Vincent, the narrative picks up pace. The 200th anniversary of the battle produced a good deal of fresh and re-ordered research which culminated in an outstanding Conference in Portsmouth, and Colin White was at the centre of this work. It is unsurprising, therefore, that the account of the battle is one of the most comprehensive, and doubtless the most accurate, so far available. In particular, the timings of the various events are analysed in detail and this analysis, with new evidence on Jervis's plans for fleet action, goes far to show that Nelson's unprecedented action in wearing out of the line was not so much disobedience as anticipation of orders. Spanish preparations and preoccupations are also more comprehensively treated than in previous accounts of the battle.

The third section on Tenerife opens with an account of the fierce little boat action off Cadiz (4 July 1797) in which Nelson, by then a rear admiral, personally took part. I wonder – observing that this whole book has as its underlying theme the early development of Nelson as a flag officer – whether Colin White

has quite distinguished here between martial ardour and foolhardiness in his hero. Certainly Nelson's intervention helped to turn the action; but did it stem from, or more importantly did it lead to, hubris?

For at Santa Cruz, hubris there certainly was. By then, it seemed, Nelson was beginning to assume the winds and waves would obey him and the Spaniards would have little further to say. At all events the first assault under Troubridge was frustrated by the elements, followed by the loss of surprise. The second, under Nelson himself, was a calculated risk – calculated, as White shows on important new analysis of the evidence, partly on intelligence from the town that defences were weak and morale low.

Numerically, indeed, the defences were thin. Gutiérrez, the Spanish commander, had under 1,700 men under command and this included a large proportion of militia. But morale was not low, and Gutiérrez's leadership was robust and well-judged. The result is well known; a disastrous British landing on the Mole, many casualties including Nelson's right arm, and the surrender of the remnant of the British landing party. Nemesis indeed.

Drawing on many hitherto untapped Spanish sources, this account of Tenerife acknowledges a thorough-going British defeat caused through over-confidence on the part of the Royal Navy and the hardihood and resilience of their opponents. It corrects many near-contemporary accounts which imply the odds were much more in Spanish favour.

So, in your reviewer's opinion, this book has important new things to say. Identification of these is helped by the presentation of new evidence in 'boxes' throughout the book. But the accounts in plain text are very much worth reading too; clear and balanced, they represent excellent scholarship. The book is well illustrated and the maps are clear (though scales of distance would have helped). Altogether it is an essential addition to any collection of Nelsoniana. As a stand-alone acquisition it would worthily introduce any reader to that eternally fascinating man Horatio Nelson.

RICHARD HILL

THE PEN & INK SAILOR: CHARLES MIDDLETON AND THE KING'S NAVY, 1778-1813

by JOHN E. TALBOTT

(Frank Cass, 1998 – £37.50 hardback, £17.50 paperback)
ISBN 0-7146-4452-8

For a desk bound sailor to have a battleship named after him and thus to be elevated to the armour-plated, copper-bottomed, oak hearted realms of naval hagiography is a rare honour and one achieved by the subject of this book who, as Lord Barham, was to have a mighty and magnificent warship bear his name.

Knowing little of Middleton, aka Barham's, achievements and determined to discover more was, perhaps, one reason why having picked up this book about the Controller of the Navy from 1778 to 1790, I read it in the minimum time possible. Strange, Middleton had an undistinguished, although prize-enriched sea career and his time as Controller was one which, although it encompassed the American War of Independence, is not a great decade of naval history. However, he did return as First Lord from April 1805 to February 1806 at the age of 79; just nine brief months but what a nine months! To be First Lord during the Trafalgar Campaign, on the conduct of which he had a decisive and incisive influence, brings to mind the lines from The Book of Common Prayer; 'One day in thy courts is better than a thousand.'

Middleton's achievements as Controller may have been less spectacular but were nonetheless far reaching. He introduced and instigated the copper-bottoming of the Fleet, he championed the carronade, he reformed old-fashioned practices, he supplied and evacuated troops and loyalists in the American Colonies. Above all he prevented the collapse of the vital elements of shore support and ensured that a Fleet was ready and available to fight the Revolutionary and Napoleonic Wars. Perhaps, he was the first to see the need to draw up plans for that vital unromantic phase known as 'The Transition to War'.

He was an energetic, self-opinionated bully of a man with little charm but able to rise to every challenge. His greatness probably lies in the fact that although many who knew him

would agree with the remark by Sir Oswyn Murray, a later First Secretary of the Admiralty that he was 'A prig and a bore of the first water', they would also agree with Sir Oswyn that 'his sense of duty was unfailing and his courage, like his industry, had no limit'. Desk bound courage is rarely the subject of maritime writing but this book proves the point that in peace and war the Service needs as ample display of this as it does at the sharper and more acknowledged end for without the former the enemy is unlikely to feel the full force of naval might.

Another pointer to Middleton's greatness was that it was Britain's youngest Prime Minister who recalled the near octogenarian to supreme control of the Navy at the country's greatest time of need. As Talbott writes, 'it seems that Middleton was named First Lord of the Admiralty and created Lord Barham because Pitt's judgment prefigured that of Julian Corbett a century later. Barham was 'the man, who for ripe experience in the direction of naval war in all its breadth and detail, had not a rival in the service or in Europe.'

So what is the appeal of this book? Firstly, it will fill what for most potential readers is a yawning, and for those unfamiliar with Pepys, a total gap in knowledge as to how the shore-side of Admiralty was organised. Secondly, it provides for those serving in the MOD or just about to a picture of the consummate political naval officer relishing the machinations of the civil/military interface and infrastructure. Lastly, it is a well written study in the Cass Series on Naval Policy and History with the bonus that the American author does provide insights and comments that might have eluded one dyed in Royal Navy blue. Barham deserves his Battleship; Talbott his readership.

DAVID CHILDS
COMMANDER, RN

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.

Plain Yarns from the Fleet, by Charles Owen (Sutton, ISBN 0-7509-1985-X – £12.99 paperback): paperback reprint of anecdotes and reminiscences from the 1900-1945 Navy.

Band of Brothers, by David Phillipson (Sutton, ISBN 0-7509-1976-0 – £10.99 paperback): reprint of account of Boys' training in HMS *Ganges* in the 1950s.

HM Submarines in Camera, by Commander J. J. Tall and Paul Kemp (Sutton, ISBN 0-7509-1971-X – £12.99 paperback): reprint of illustrated account of HM Submarines from Holland 1 through to 1996.

The Life and Times of Horatio Hornblower, by C. Northcote Parkinson (Sutton, ISBN 0-7509-1224-3 – £12.99 paperback): reprint of a book first published in 1970, outlining the career of the fictional hero against authentic historical background.

The Hornblower Companion, by C. S. Forester (Chatham, ISBN 1-86176-098-1 – £12.95 paperback): reprint of a book first published in 1964, giving local colour to some of the Hornblower exploits with the aid of charts drawn by Bryant and including a long essay by Forester on the genesis of the series.

Sails for Racing, by John Heyes (Fernhurst Books, Arundel BN18 9AJ, ISBN 1-898660-50-6 – £12.95 paperback): new edition with a 32pp. section on asymmetric spinnakers. The other sections are general principles; dinghy and keelboat sails; and yacht sails.

On the Ebb, by Mike Peyton (Fernhurst Books, ISBN 1-898660-53-0): Sailing cartoons. Back cover reads 'Sailing seriously damages wealth'.

Weather at Sea, by David Houghton (Fernhurst Books, ISBN 1-898660-49-2 – £11.95 paperback): Colour edition of book first published 1986. 78 pages, up to and including synoptic plotting.

Ladysmith, by Lewis Childs (Leo Cooper, ISBN 0-85052-611-6 – £9.95 paperback): the subtitle 'Colenso/Spion Kop' gives a better impression of the scope. Naval Brigades' work is covered in some detail.

Singapore Repulsed, by Ian Hay (Pentland Press, ISBN 1-85821-542-0 – £13.50 paperback): author was an Ordinary Seaman in *Repulse* when she was sunk in December 1941. A bitter account, not easy to follow.