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(INCORPORATED IN THE ACT)

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Views expressed in this journal are those of the authors, and not necessarily those of the Department of Defence, the Chief of Naval Staff or the Institute.

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Cover:
The specially prepared Sea King displays the Australian White Ensign over the NSW coast in celebration of the RAN's 75th Anniversary.
Photograph by POPH Martin courtesy of Command Photographic Centre.

FROM THE EDITOR

Of the many events which have occurred in the quarter since the publication of Volume 2, three have special significance.

One in significant to the ANI, Commodore Ian James, President since 1983, has stood down coincident with his retirement. I welcome this opportunity to echo the tribute to his leadership paid elsewhere in this edition and to wish him well in the future. His successor, Captain Alan Brecht, introduces himself in his own column on page 4. The column will be a regular feature.

The second in significant to the RAN. It celebrated its 75th Anniversary on 10 July, an event which in commemorated on this edition's cover.

The third in significant to all Australians. Paul Dibb has presented his *Review of Australia's Defence Capabilties*, a document which promises to be the basis of the framework within which the ADF, and therefore foreign policy, is shaped over the coming decades. It has provoked debate. Hopefully, that which has occurred is only the start of informed, rational consideration of what should be a fundamental issue for all citizens.

This edition includes four contributions on the Dibb Report. They have been grouped together under the logo from the Report's cover to reflect their common genesis. My plan is that the logo will be used in subsequent editions to identify further contributions to this debate. They can be of any shape, any length or on any aspect. They may raise an issue or comment on one previously raised by some other commentator. The level of member response to the invitation to participate provided by Dibb's *Review* will be a measure of our commitment to our role and belief in our purpose.

As well as in the Dibb section, strategic issues are considered in two other major articles in this issue. Lieutenant Commander David Masters' Silver Medal prize-winning essay discusses maritime strategy within a framework of armed neutrality or non-alignment. Lieutenant Alan Hinge presents an assessment of the strategic balance in the Asia — Pacific region.

Amongst regular items and notices, one item of Chapter News is printed on page 4. I would like to repeat the invitaton, extended in previous editions to Chapter Convenors and Secretaries, to use these pages to report activity, or advertise future events. The health of the ANI depends upon the vigour of the Chapters. The Council, through the Journal, will support any measures which will promote Chapter activity.

'Management' is to be the theme of the November issue. Contributions, in any form — major articles, shorter pieces, letters — are sought. The area is a wide one. Within the Defence Force it ranges from management of a department to bureaucratic management of the Force as a whole. Outsider the Defence Force, principles, practices and problems related to managing defence and maritime activities are pertinent. And of course, facets of the inter-relationship between these two sectors, and between them and government, are relevant too.

The deadline for all material — on Dibb, on management or whatever — for inclusion in the November issue in 21 October. Early advice (by telephone or mail) of an intention to contribute, including some indication of the topic to be discussed and likely length of submission would be appreciated so that the necessary, supplementary material can be solicited.

John Hyman
(062–676656)

CHANGE OF PRESIDENCY

Consequent upon his retirement from full-time service, Commodore Ian James has relinquished his presidency of the ANI. The office has been assumed by Captain Alan Brecht.

FROM THE PRESIDENT

I have initiated this small space in the Journal as means to inform ANI members of Institute activities througout the year, whether these be planned major events or merely snippets of Chapter happenings. My aims are to encourage everyone to take an interest in what is going on in the various centres of ANI endeavour throughout Australia and particularly to touch upon matters of importance as they are considered by the ANI Council. The views of the membership at large could contribute greatly to plans and programmes for the Institute and in this respect I welcome your letters or opinions. These could be either for publication in the Journal or not, as preferred.

Apart from Chapter events and routine ANI business a most important topic before Council just now concerns a proposed seminar in 1987 which could provide an ANI impetus to the Bicentenary year. I shall share these plans with everyone as they become firmer but at present it is probable that the seminar would be held in September next year and look at the maritime defence needs of Australia after the turn of the 21st. century. These requirements will pose a technological challenge to industry thus the seminar would be well placed to also examine the capability that could be expected of Australian industry in the same timeframe.

Another matter with a Bicentenary flavor is a plan by Council to publish or sponsor publication by the ANI of a history of Garden Island as the birthplace of our nation. This seems a very worthwhile venture which would make public a most interesting document written by an able historian who was also a naval chaplain in the fledgling pre-World War I Australian navy. I shall provide a window into the successes and anxieties associated with this plan, as it proceeds.

I know that I speak for all those who served upon Council or were associated with Commodore Ian James during his time as President in thanking him for his leadership and guidance from 1983–86. I'm sure he will enjoy his retirement in the sunny climes of West Australia and we wish him well.

Please keep your articles and letters coming in for the Journal. It is the lifeblood of the Institute so if you have been thinking of putting pen to paper — now is the time. Thoughts and ideas on any aspect of the ANI or its activities are most welcome.

Sincerely,
Alan Brecht.

CHAPTER NEWS

MELBOURNE CHAPTER

The Chapter will hold its Annual General Meeting on Monday 25 August 1986, commencing at 1800, at the Royal Melbourne Yacht Squadron Clubhouse, St. Kilda.

Nominations for the position of Chapter Convener, Secretary and Treasurer, for 1986/87 are called for.

An Open Forum will be included, with discussion on ideas for improving and strengthening the Chapter. Members are stongly urged to attend. Visitors and prospective members are welcome.

N.G.E. Daniel
Secretary

CORRESPONDENCE

RAN's Inadequate Amphibious Capability

Sir,

I seek space in your columns to represent that the recent disastrous cyclone damage to the Solomon Islands, and Australia's praiseworthy efforts to bring aid to those devastated islands, has highlighted the Royal Australian Navy's wisdom in 1975 when it sought funding for *two* amphibious heavy lift ships, and the short-sightedness of the Department of Defence's committees in only agreeing to the procurement of one ship with which the Defence Force could acquire 'state of the art capabilities'.

HMAS Tobruk, designed and built to insert personnel, equipment and stores tactically across a beach and to support them there by use of the landing craft and helicopters that the ship can carry and operate, and to control operations on shore from the Joint Operations room provided in the ship, would have been the tailor-made key ship for Australia to be able to send to the Solomons for disaster relief. But *Tobruk*, after five very busy years in developing Australian amphibious warfare capabilities, deploying peacekeeping forces to Israel, providing disaster relief to Tonga, acting as a Prime Ministerial Headquarters ship at Tuvalu for the South West Pacific forum, is now refitting.

With *Tobruk* refitting, Australia's ability to provide the most effective disaster aid — or any efficient amphibious lodgement capability — is lost. Any form of single ship capability is less than half a capability because any refit or docking requirement removes the capability entirely. As this recent cyclone demonstrated, neither natural disasters nor hostile operations are likely to be timed to occur only when a single ship capability is operationally available to react to the situation.

HMAS Stalwart, the escort maintenance ship which is having to lead the Australian maritime relief effort, can provide neither the amount of cargo space of *Tobruk*, nor the multi helicopter operating capability, nor the landing craft deployment capability, nor *Tobruk's* command and control facilities. The presence of *HMAS Tobruk* and/or her sister ship, (if such had been built), would have been the ideal Australian response to the Solomon Island disaster, or any similar events. This amphibious ship capability would have enabled Australian Army Engineers with appropriate field engineer equipment to be inserted by landing craft to clear debris and create new helicopter landing sites in remote islands while the three helicopters that the ship could operate could have been flying in aid equipment and evacuating injured to the ship's hospital facilities.

With this current object lesson before them, it is believed that the Defence Department should make haste to order the second amphibious ship that the Navy originally sought in 1975. Benefitting from the five years experience of operating *Tobruk*, her sister ship could be constructed with improvements built in to overcome the few technical faults that marred the first few months of *Tobruk's* otherwise most successful Service life. New technology could also be reflected in the design update.

Like the RAAF's transport aircraft, the RAN's amphibious ships are able to undertake their primary operational roles in peacetime and do not have to await hostilities for their full potential to be developed as is the case with destroyers and submarines. As such they provide the Government and nation with particularly good value for money.

If Defence funds are deemed to be too tight, attention is called to the recent Italian solution to a similar problem. There the Government has ordered two 7000 tonnes major amphibious ships of the same class, both to be manned by the Italian Navy but while one is funded from the Italian Naval Vote, the second is being funded by the Ministry of the Interior with its primary peacetime roles being the provision of disaster relief and civic aid. It is recommended that a similar funding arrangement be considered for Australia.

The essential national requirement is to obtain a year-round capability, irrespective of refits and dockings, for the RAN to be able to insert personnel, equipment and stores across a beach by landing craft and helicopter, wherever they are required, and to be able to command and control such operations from offshore until such joint command arrangements can be established ashore. The requirement has been known for eleven years. It is time it was fulfilled.

P.J. Shevlin

ADVERTISING INFORMATION

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— COLOUR: Four colour separation negatives

Screen Size — 133 preferred by 125–150 acceptable

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Notes:

1. Discount Rate applies if booking is for four or more successive journals with same advertisement. The bulk rate is for the same if the total bill is paid with initial order.
2. The deadlines for material are: Vol 1 21 Jan; Vol 2 21 Apr; Vol 3 21 Jul; Vol 4 21 Oct.
3. Payment should be made on receipt of invoice.
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5. A copy of each journal will be sent with invoices.
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7. Charges for Vol 4 1986 will be supplied on request.
8. Advertising Manager may be contracted on telephone: (062) 65 5892

The author was awarded the ANI Silver Medal for this essay submitted during his attendance at the RAN Staff College.

IMPLICATIONS OF A STANCE OF ARMED NEUTRALITY OR NON-ALIGNMENT FOR AUSTRALIA'S MARITIME STRATEGY

By LIEUTENANT COMMANDER D. MASTERS, RAN

INTRODUCTION

It is difficult to judge the degree of support by Australians for a policy of armed neutrality or non-alignment. Although articles and books advocating the adoption of neutralist policies appear occasionally, there does not seem to be any ground swell of public opinion in their favour. Nevertheless, it is apparent that support, particularly from peace groups but also more widely, is growing.

Contributing to this growing support is the fact that there has been for sometime no apparent or foreseeable threat to Australia in the region, and therefore no evident need for the defensive deployment of Australian armed forces. The value of the ANZUS treaty to Australia's security is increasingly being questioned; in recent years there has been far more challenge and opposition to the treaty than at any time in its history.

Further, the declaration of a Pacific Nuclear Free Zone and 'Zones of Peace, Freedom and Neutrality' (ZOPFAN) in our region, encourages the advancement of neutralist concepts in Australia. There is no denying the appeal (emotive or otherwise) of a neutralist policy and it can reasonably be expected to gain greater popular support as the efforts of peace movements locally and world wide gather momentum.

It is therefore not impossible that at some future time a policy of non-alignment and/or neutrality may be adopted by Australia. The aim of this essay is to determine the implications for Australia's maritime strategy of a stance of armed neutrality or non-alignment.

NEUTRALISM, NON-ALIGNMENT AND NEUTRALITY

It is necessary at the outset to define what is meant by the terms 'neutralism', 'non-alignment' and 'neutrality'. Essentially neutralism, in international politics, is the policy of non-alignment with major power blocks, as pursued by such countries as India, Yugoslavia, Egypt, Kenya and most of the new states of Asia and Africa. These countries, for the most part, are not aligned with either the Communist bloc, led by the Soviet Union, or the Western bloc, led by the United States. This does not mean however that they are neutral or isolationist. They participate in international affairs and also take positions on international issues[1].

Neutrality is the legal status arising from the abstention of a State from all participation in a war between other States, the maintenance of an attitude of impartiality toward the belligerents, and the recognition by the belligerents of this

The Author

Lieutenant Commander Masters joined the RAN in February 1962 as a Recruit Naval Air Mechanic (Airframes and Engines). Except for three deployments in *HMAS Melbourne* in 1965, 1972 and 1973, he served at *Albatross* until 1975. Then, as a Chief Petty Officer, he was posted to *HMAS Leeuwin* for SGCE training. He was commissioned in 1976. Postings since then have included *HMAS Albatross* 1977–82 (as XO's Assistant, PSO and in the ATD) and Navy Office. He was posted as SO DGNOR on completion of RAN Staff Course in June 1986.

abstention and impartiality[2]. Neutralism is not the same as neutrality. Neutralism refers to the foreign policy (non-alignment) of a State in time of peace, whilst neutrality is a term in international law referring to the rules that States are obliged to follow during a legal state of war in which they are not belligerents[3].

David Martin, in his book 'Armed Neutrality for Australia', states 'It is easier to point to similarities between non-alignment and neutrality than to make sharp distinctions. Non-alignment is basically a political condition. It is practised in the main by countries of small or medium size, or strength, most of them fighting to emerge from economic backwardness. Neutrality is practised by nations which share some important aspirations of the non-aligned: like them they encourage detente and discourage the maintenance of a balance of destruction. But beyond and above these incidental objectives, neutrality stresses non belligerence and all that it entails. To be neutral is to keep out of war'[4]

For the purpose of this essay then, non-alignment will be considered the foreign policy component of neutralism, (a condition which has no status under international law), whilst neutrality, (which does have status under international law), will refer to non-participation by States in war.

A NEUTRAL AUSTRALIA?

It was stated in the introduction to this essay that at some time in the future a policy of non-alignment or neutrality may be embraced by Australia. What are the attractions of these policies which could lead to their adoption? This question needs to be answered for the scenario to be given any credence.

Non-alignment

The four criteria of non-alignment espoused prior to the first non-aligned summit in Cairo in 1961 are ideals which, it is suggested, would find many supporters. The criteria are:

- an independent foreign policy dedicated to peaceful coexistence;
- support for national liberation movements;
- non-participation in military pacts deemed 'instruments of the cold war'; and
- unwillingness to grant military bases to the great powers[5].

If the second and third criteria were presented in different (perhaps 'more acceptable') terms, there may likely be greater acceptance among Australians of the ideals they express. For example, 'support for national liberation movements', (which may be seen as being associated with radical groups), could arouse greater empathy if it were expressed as 'support for national self determination'. Similarly 'non-participation in military acts deemed "instruments of the cold war" ' may be reworded as 'independent contribution to regional and global stability'. These amended criteria would find support from those wishing to see this country adopt a more self-reliant, independent stance.

The fourth criterion, which can be extended to include 'joint facilities', would find particular favour as the presence of joint facilities in Australia is seen by many to represent the greatest danger to our well-being. There seems little doubt that, in the event of a nuclear war involving the superpowers, the joint facilities at Pine Gap, North West Cape and Nurrungar would make Australia a nuclear target; '. . . there is a finite risk that one or all of the facilities would be attacked during a Soviet-United States war that involved their strategic nuclear forces'[6].

Neutrality

There are different degrees of neutrality. A 'permanently' neutral country is bound to keep out of war, whilst a country which is 'transiently' neutral can decide whether to take part in it or not. Although a permanently neutral country is seen to have greater credibility in international law (it is not just neutral from time to time, as it pleases), both transiently and permanently neutral countries have the same rights and obligations. The permanently neutral State, though, is far more likely to have its status respected than is the transiently neutral.

A neutral country is not one which abandons its sovereign rights, leaving itself to the mercy of international predators. Neutrals, particularly permanent neutrals, accept that they must be prepared to defend their sovereign independence. Without this commitment to physically defending itself a country's declared policy of neutrality is hardly credible.

It would seem therefore that if a country were truly serious about being neutral it must aim for the status of a permanent neutral, and be capable of defending itself. That is, it must be armed rather than unarmed. Further, in order to meet the requirements of neutrality it is also the case that such a country must be non-aligned. An example of this is Switzerland. Switzerland has chosen to remain free of any alliance in order to remain neutral in the event of war in the area, and it has a strong defence system. The same is true of Sweden, although it has never declared itself permanently neutral, preferring to describe itself as 'actively' neutral. These two

countries, economically, socially and militarily strong, are proof to many people of the efficacy of non-alignment and armed neutrality. Although there have been failures, e.g., Belgium and Holland in World War Two, the success of others (Switzerland, Sweden, Austria, Finland and Ireland) give continuing encouragement to its supporters, both in Australia and elsewhere. Further adherents can be expected to be attracted, particularly if superpower tensions do not moderate.

Assuming Australia adopted a neutralist non-aligned policy, it is difficult to envisage her opting for unarmed neutrality. The Australian character is not one which would accept passive neutrality. Australians have always felt the need for global and regional security, and this has been provided through alliances. On adoption of a non-aligned, neutral policy and the necessary dismantling of defence treaties with the Western bloc, Australians would be most uneasy if they thought there was no protection at all.

For all these reasons (protection of sovereignty, national character and the perceived need for security) a neutral, non-aligned Australia would opt for armed rather than unarmed neutrality. In further considerations involving a neutral Australia, it shall be taken that she will be both non-aligned and armed.

STRATEGY

Before considering the implications of such an event for Australia's maritime strategy it will be helpful to determine what the strategy is. There does not appear to exist a document which categorically describes Australia's maritime strategy. There are many articles published in Defence journals, usually couched in traditional terms such as command of the sea, sea denial, sea assertion and power projection, which purport to describe what that strategy should be, but nothing describing what it currently is. To deduce our present maritime strategy it is necessary to first consider national defence strategy.

Defence Strategy

Defence strategy derives from national strategy which in turn derives from the national aim. It is beyond the scope of this essay to discuss the latter two strategies. However it is possible to define defence strategy through consideration of published material attributable to the Government and others.

Australia's defence strategy in past years has been based on 'forward defence'. This was a strategy very much attuned to a foreign policy emphasizing Australia's role as a partner in a global Western alliance. Our obligations under the alliances and treaties made first with Britain and later with the US, were the dues we had to pay in order to shelter under the protective umbrella of a superpower.

Ever since the enunciation of the Guam Doctrine in 1969, there has been an increasing awareness in Australia of the need to adopt a more self reliant military posture. It is only in the last few years however, that the Government has taken any overt action to define a new defence strategy. The strategy which has been emerging is one based on self reliance and which has us moving away from the concept of fighting alongside allies in a global sense (i.e., forward defence), to one of the defence of Australia. The Defence Minister, Mr Kim Beazley, made this point on 24 June 1984, when he stated, 'The Government's defence policy begins with the objective of developing a more self reliant strategic posture, based on an independent national capability to defend Australia and its direct interests'[7].

To encapsulate this into a few words under the heading of 'Australia's Defence Strategy' is somewhat daunting. To describe it as 'the independent defence of Australia' is perhaps too narrow. 'To deter attack on Australia through a strong and independent defence force' may be closer to the mark, although there should be included an indication of resolve to overcome an aggressor should deterrence fail: hence, 'to deter attack on Australia through a strong and independent defence force, and should deterrence fail, bring the conflict to a favourable conclusion'.

This strategy statement contains the traditional strategic elements (i.e., 'deterrence', and 'favourable conclusion') which remain relevant, and at the same time conveys the modern Australian concept of self reliance (i.e., 'strong and independent'). It is put forward as the statement of defence strategy representative of the political and military situation as it now exists in Australia. Having arrived at this point it is possible to advance to the next step; defining Australia's maritime strategy.

Maritime Strategy

Australia's maritime strategy has been aligned with our past national defence strategy; that is it has been one which reflects a policy of forward defence. Forward defence in the sense of Australian maritime strategy may be interpreted to mean possession of the means to support our allies and own forces in areas distant from Australia.

With the shift away from a forward defence philosophy to one of defence of Australia and its

direct interests, the requirement to project power far beyond the mainland and to supply units to take part in other powers' wars will no longer be so valid. Similarly, there is now a greater appreciation of the limitations of the ANZUS treaty, hence the emphasis which is being placed by the Australian Government on the need for greater self reliance in defence matters.

The maritime strategy evolving is one which must be supportive of the national defence strategy. If an attempt is to be made to determine how maritime strategy will be influenced by political developments, such as non-alignment or neutrality, it is necessary to pin that strategy down so that a reasonable projection can be attempted.

Australia's maritime strategy can be described as one of maintaining a naval presence in our region. In times of tension the strategy would become one of deterrence, in a regional sense, and in the event of a conflict the strategy will aim to deny the use of the sea to the enemy. This sea control strategy would extend beyond the immediate sea approaches to include areas of direct interest to Australia.

THE NEUTRALIST VIEW

One Possibility

As a neutral country Australia's only military obligation would be to defend herself. Those in favour of armed neutrality see the defence function being primarily one of deterrence. David Martin indicates that the deterrence force already exists; it comprises mainly the F-111 and submarine force[8]. However, he also believes that a strong land force is necessary, and using data provided by Dr Ross Babbage, puts the total requirement at 250 000 men[9].

Martin further puts forward the view, attributed to Colonel Langtry and Desmond Ball, that a disproportionate response from a possible enemy, in terms of men, material, money and time, would be required if Australia were to purchase extra numbers of relatively cheap submarines. This would require the likely enemy to spend possibly ten times as much to counter the threat posed by the submarine force, as well as leading to the possible over extension of his logistic and other facilities[10]. The hoped for result is that such a price may, of itself, prove to be a deterrent.

Martin is of the view (and it is shared by many geostrategists) that the seas surrounding Australia are a fine defence asset[11]. Providing the right balance of maritime and air forces to control these seas, thus denying them to an enemy whilst ensuring their use to ourselves, would be the objective.

To achieve this, Martin does not see the need for larger, more costly surface ships with their attendant need for escort vessels. Rather, he sees the answer as greater numbers of submarines, to be built in Australia. These would be supplemented with ASW forces, to counter any opposing submarine threat, based on small helicopter carriers, which could be converted merchantmen. Further he states 'Essentially what we must have are mini-destroyers, frigates and corvettes, sufficient mine-laying and mine-removal auxilliaries, large power boats and landing craft'[12]. He does not attempt to define the numbers of different craft required; however they would need to be considerable, remembering that as a neutral country Australia could not rely on assistance from other countries in time of conflict. The responsibility for denying the use of the sea to our enemy would be entirely ours.

Martin acknowledges the requirement for new bases, particularly in the north and north-west, to support these forces. However he calls for 'modest facilities which could also serve civilian needs', not 'a dinosaur like Cockburn Sound, meant for the US Navy'[13].

Interestingly, Martin does not propose a Fortress Australian policy for an armed and neutral Australia. He sees our maritime area of interest as being 'bounded by Mawson, Colombo, Singapore and perhaps Leyte[14], and does not see the need for a presence nor any requirement for protection of supply lines beyond that boundary'[15]. This is perhaps a larger area of interest than would be expected by most Australians favouring neutrality. In any event, the maritime forces Martin describes as being necessary would need the larger type vessels he rejects if he is serious about maintaining an interest in this large area.

In general, Martin's views on the military requirements for an armed and neutral Australia may not be supported, to the extent he proposes, by the supporters of neutrality, particularly in the regional no-threat situation which now exists. Interesting as his views are, they would not, it is believed, represent majority neutralist opinion. It is far more likely that a narrower view of the maritime area of interest would prevail. The need for maritime defence, as part of the overall deterrence posture would, though, be recognized. However, the major deterrent force in a neutral Australia would very likely be a large Army, a potent Air Force and a fairly small sea denial Navy. This is more in line with a 'continental defence' strategy which, it is suggested, would be that favoured by a neutral Australia.

A NEUTRALIST MARITIME STRATEGY

Having examined the views of one protaganist of armed neutrality, (Martin), and balanced them against what would probably be the popular neutralist view, it is now possible to assay an opinion on what an appropriate maritime strategy would be for a neutral Australia.

Sea Denial

If it is accepted that an Australian neutralist policy would be inward looking, but conscious of the need for a strong defence force to protect and ensure the credibility of her neutral status, the resulting maritime strategy could broadly be described as one of sea denial. It would, however, require some reliance on land based air power.

It will be recalled that Australia's current maritime strategy was earlier determined to be one of:

- maintaining a presence, (in peacetime);
- deterrence, (in times of tension); and
- sea denial, (in wartime).

There may seem to be little difference between the two strategies, (neutralist and current), as deterrence and sea denial are common to both.

However there are differences in emphasis and scale. Australia's current peacetime maritime strategy emphasizes the need to maintain a presence in our areas of interest, which extends from the Indian Ocean to the Western Pacific and from the Southern Ocean to Japan. Although not able to maintain a continuous presence in all these areas at the same time, Australia is nevertheless able to 'show the flag' often enough to register its regional interest and furthermore, has the number and types of vessels required to do so.

The Australian Fleet, collectively, is a strong force in the region, and in the event of tension would prove a real deterrent to a credible regional threat. Similarly in times of conflict, (once again dealing with a credible regional situation), a sea denial strategy would be achievable. In a conflict situation involving other than regional forces, (i.e., those of the USSR), Australia could reasonably expect assistance from its ANZUS partner, the US.

Contrast this with an armed, neutral Australia. Her maritime area of interest would be much more localized, extending no further than one which could be covered effectively by land based air power, perhaps 500 miles. Because the emphasis would be on looking after one's own back yard, the fleet required to patrol this area would not include vessels of the size and endurance necessary to show the flag far from the mainland.

Such a fleet would comprise mainly submarines, ships of corvette size, patrol boats and smaller craft. These are all that would be considered necessary to patrol our local seas. They would require considerable land based air support to provide any meaningful sea denial capability.

The Implications

The implications for Australia's current maritime strategy consequent upon the adoption of a stance of armed neutrality are therefore seen to be an inability by the country's maritime force to provide:

a. a naval presence, beyond a very limited area;
b. any significant deterrence, by itself; and
c. any effective sea denial capability, once again, by itself.

CONCLUSION

This essay has been produced on the assumption that Australia may at some time in the future embrace neutrality and has made the judgement that if it did so it would opt to be armed rather than unarmed. Indeed, the point has been made that to be a credible neutral, Australia would have to be armed. Also for reasons of credibility and as a requirement of international law, she would have to be non-aligned.

The primary aim of the armed forces in a neutral Australia would be to deter any potential aggressor from attacking her. It could be expected that in the prevailing mood of neutrality, particularly in the absence of any threat, justification for the maintenance of those elements of the fleet designed for extended operations far from the mainland would not exist.

Reliance would be placed upon an essentially defensive Navy, acting with the assistance of land based air power, to achieve a measure of sea denial in the event of the overall military strategy of deterrence failing. Such a force could be expected to enjoy some success in this strategy against any presently credible lower level regional threat. Of course, there are no guarantees that a neutral, non-aligned Australia would have her status respected by a potential aggressor or other belligerents. This is the gamble that any neutral country takes.

However, such a policy will inevitably result in an inability by the Navy to maintain an effective presence in our region. This will in turn signal a lack of interest and commitment by Australia in regional affairs, creating an imbalance, which may encourage regional states to look elsewhere for assistance, aid and advice. There

are instances of this occurring in our region already, (e.g., Kiribati has entered into a fisheries agreement with the USSR, and Vanuatu seems intent on courting Libya). A maritime strategy which permits Australia's regional interests to be manifestly displayed is becoming of increasing importance to the stability of the region.

In the absence of any specific threat to Australia the preservation of a balanced force to assist in the maintenance of the regional status-quo is essential. A maritime strategy shaped by a neutral Australia would not permit this aim to be met.

It is appropriate to conclude this essay with a quotation by the US Secretary of State, J.F. Dulles, from a speech of 9 June 1956, in which he labelled the idea of non-alignment or neutrality as 'an immoral and shortsighted conception', equating it with 'indifference to the fate of others'[16].

Acknowledgements

1. *Encyclopedia Brittanica*, Ready Reference, vol. VII, p 280.
2. Ibid.
3. Ibid.
4. Martin D. *Armed Neutrality For Australia*. Melbourne, 1984. p 5.
5. LeoGrande W.M. *Evolution of the Non-aligned Movement. Problems of Communism*. Jan/Feb 1980. p 37.
6. Joint Committee on Foreign Affairs and Defence. *Threats to Australia's Security — Their Nature and Probability*. Canberra, 1981.
7. Beazley K. *Australia's Strategic Outlook and Defence Policy*. Minister's speech at Pennsylvania State University, 24 June 1984.
8. Martin. op cit p 139.
9. Ibid p 142
10. Ibid p 141.
11. Ibid p 153.
12. Ibid p 154.
13. Ibid
14. Ibid
15. Ibid
16. Jackson R.L. *The United States and the Non-aligned Movement*. Review of International Affairs. 5 Feb 1986. p 13.

Books

Babbage R. *Rethinking Australia's Defence*. University of Queensland Press. Brisbane, 1980.

Ball D. *Strategy and Defence*. George Allen and Unwin. London, 1982.

Till G. *Maritime Strategy and the Nuclear Age*. MacMillan Press. London, 1984.

Willett P. *The Non-aligned Movement*. Frances Pinter Ltd. London, 1978.

Articles

Brown N. 'The Delusions of Neutralism'. RUSI May, 1981.

Godfrey-Smith T. 'Low Level Contingencies and Australian Defence Policy'. Canberra Papers on Strategy and Defence, No. 34.

Hofstens H. von. 'Non-alignment in No-mans Land'. Pacific Defence Reporter. November, 1984.

Leach D.W. VADM. 'The Naval View'. Seapower '84. Proceedings of the Third National Seminar of the Australian Naval Institute. April, 1984.

Millar T.B. 'Australia — Ally, Friend, Neutral?'. The Round Table (1986) Vol 297

O'Niell R. 'Australia's Strategic Options in the 1980s'. The Strategic and Defence Studies Centre. Working Paper No 30. November, 1981.

Robertson J.A. CDRE. 'The Fundamentals of Maritime Strategy'. Journal of the Australian Naval Institute. November, 1978.

Stackhouse J. 'Defence Brass Prepares for Infighting'. The Bulletin. April 8, 1986.

Sunderland R. 'Australia's Changing Threat Perceptions'. The Strategic Defence Studies Centre. Working Paper No. 78. March 1984.

Sunderland R. 'Australia's Emerging Regional Defence Strategy'. The Strategic Defence Studies Centre. Working Paper No. 80. July, 1984.

Towle P. 'Non-aligned Criticisms of Western Security Policies'. The Strategic Defence Studies Centre. Working Paper No. 14. July, 1979.

Review of Australia's defence capabilities

COMMENTS ON THE DIBB REPORT

A PERSPECTIVE

Anonymous

Even if it does nothing else, the Dibb Review is sure to enliven the defence debate in Australia, a debate that has for some time now been moribund. Not that the purpose of the Review is merely to spark debate. Clearly it has a more fundamental and important purpose — that of assisting the development of rational and realistic defence policies.

However, as a catalyst for the defence debate the Review has already had an impact. In the brief time since its public release early in June 1986 the Review has generated a great deal of newspaper comment. Yet, one could argue, the real debate has hardly begun. What we now need to supplement the somewhat superficial newspaper comment is an indepth debate on the basic and fundamental issues relating to the defence of Australia.

In using the Dibb Review as a point of focus for the defence debate in Australia it is important to keep the Review in perspective. Here two points arise.

Firstly, the Dibb Review is not a comprehensive blueprint for the defence of Australia, notwithstanding the propensity of the news journalist to treat it as such. The Review is, as its title and its terms of reference make clear, a review only of Australia's defence capabilities. The end product of the Review is a series of force structure proposals with an emphasis on capital equipment. The budgetary concern in the report is with the capital equipment program, which in itself represents less than one third of the defence budget.

While the Review contains a sound and well-argued segment on defence strategy, the thrust and purpose of this segment is to provide a logical basis for force development, for deciding on the future size and shape of the Defence Force and the capital equipment required for the Force. The Review does not, for example, deal with the use of diplomatic or economic means to try to influence strategic developments within Australia's more immediate region of interest. Nor does it deal with such matters as, for example, personnel training and development, defence cooperation with neighbours, conditions of service within the Force, operational doctrine and organizational arrangements within the three Services. Such matters lie outside the Review's terms of reference.

Secondly, the Dibb Review is not an endorsed Government policy document. It is a Government initiated and funded independent review and is intended as a basis for discussion and further consideration of what is seen currently as the key issue for Australian defence policy. The Minister for Defence has already made it clear that he does not accept unreservedly each and every recommendation. However, it would probably be fair to say that the Minister does accept the general thrust of the Review.

That the Review has yet to be accepted as Government policy is important in that it means that the debate is still wide open. Clearly, the Government is looking for wide acceptance of its final stance on the defence of Australia.

Another area of concern relating to the use of the Dibb Riview is that to do it justice, and to get full value from it, it should be read in the original. Newspaper reports of what is contained in the Review can be quite misleading. For the news media the Review is seen in its political context and has been reported more for its news value that its real contribution to the defence debate. While undoubtedly the Review must be seen as a political document, it is much more a serious defence/strategic treatise than a political exposition.

Even the Review's own Executive Summary does not do full justice to the detail of the argument as set out in the body of the report. This is so particularly of the earlier parts of the Review which deal with what might be termed the strategic basis. Thus the Review deserves to be read in detail with the reader drawing his own conclusions as to what Dibb has had to say, rather than relying on the often biased view of others.

The general structure of the review is of the development of a defence strategy to match Australia's strategic circumstances. This strategy in turn forms the logical basis for specific force structure proposals. In most cases the force structure follows logically from the strategy. Thus, in examining the recommendations of the Review, it is often necessary to go back to the strategy and its basis to track down the real source for any disagreement that may exist as to particular recommendations.

For example, there are some who may well be critical of the 2000 ton light patrol frigate concept as set out in the Review. Here, in order to follow up this difference of view, it is necessary not to criticise Dibb's judgement of naval matters per se, but rather to try to find where in the strategy or its basic assumptions there is cause of disagreement. This is where the real value of the debate is to be found, not in the more direct argument over specific items of defence equipment.

Patrol frigates are not the only area of likely contention. Many a soldier will dispute Dibb's views on the importance of the tank, while airmen in general are likely to be incensed by his proposals for the future ownership of battlefield helicopters. Be this as it may, of far greater significance, and ultimate value for all Australians, will be the debate on the more fundamental aspects of Australia's defence.

In the debate on the fundamentals of Australia's defence, some of the issues that could well come up for consideration are:

- the validity of the 10 year warning time for 'more substantial conflict';
- the priority that should be given to low level conflict in force structure development;
- the balance between the offensive and the defensive in our overall defence posture;
- the place of the US alliance in our defence strategy;
- the justification for increased defence spending.

Perhaps the debate might even get down to such really fundamental questions as: why do we have a defence force; and why do we spend the huge sum of six billion dollars per year on defence? These are questions to be asked not because the answer might be that we don't need a Defence Force after all, but rather to expose just what it is that lies behind the widely held view that we cannot be certain as to the future and that we do need to take some precautions to protect ourselves. But against what, and how much effort should we devote to what amounts to insurance against uncertainty? That is the 6.4 billion dollar question. And while the answer may not be in the Dibb Review of Australia's Defence Capabilities, the Review does give us cause to ask, and to ponder.

THE DIBB REVIEW

By Captain C.J. Oxenbould RAM

Some time has now elapsed since the report of the Defence Capabilities Review (DCR) conducted by Paul Dibb was tabled in Parliament by the Minister for Defence. It has stimulated considerable comment and debate within the media, and while the standard of this discussion has fluctuated markedly, the consensus among most defence commentators is that the Review is generally good; it is a major step forward in its contribution to the public discussion of important defence issues, and in some areas it addresses matters not previously raised in the public forum. It also provides a good working base for the future development of the Defence forces and production of the Defence White Paper, which the Minister for Defence has foreshadowed will be produced, probably in late 1986.

Apart from these more obvious benefits, the

independent assessment of Defence has also led to a close self-examination which, in itself, has produced benefits which are not directly related to the DCR final report. It gave added impetus to the development of a Military Strategy for Australia and an ADF Concept for Operations; it has helped resolve several long standing differences between the Services and the Department on some fundamental issues — such as the level of conflict on which force structuring should be focussed. (In fact, it was the unresolved disagreement between the Department and the ADF over this issue which led Mr Beazley to commission the DCR).

The Review's specific force structure proposals have been much publicised and generally auger well for the Navy's future. Mr Dibb proposes a fleet with:

- 8–9 higher capability ships such as the FFGs and DDGs, with studies into the DDG replacement to continue;
- 8 Light Patrol Frigates (LPF);
- 6 new submarines;
- 10 patrol boats to replace the Fremantles in the 1990s;
- 16 Seahawk helicopters;
- 12 reconnaissance helicopters for the LPFs; and
- 6 minehunter catamarans.

It also proposes general support for other MCM programmes and Navy's initiatives in areas such as hydrography, intelligence and the Reserves.

EVOLUTION OF THE REVIEW

The DCR report was produced in just over 12 months and its scope is wide-ranging. It begins with strategic considerations and from these derives broad defence capabilities seen as being appropriate to Australia's circumstances. After considering supporting matters such as command and control, planning for conflict, civil defence, logistic support and industry for defence, it makes force structure recommendations. It then considers the Reserve Forces and, finally, the resource implications of its proposals.

To complete this enormous task in such a short time-frame, Mr Dibb was assisted by a small team of three: Colonel W.J. Crews an Army Engineer with a background in intelligence; Dr R.G. Brabin-Smith, the recently appointed First Assistant Secretary of the Force Development and Analysis Division of the Defence Department; and Mr M.J.M. Brady, who recently joined the Joint Intelligence Organisation from the Strategic and International Policy Division of the Defence Department.

Shortly after forming, the team developed its modus operandi: to produce the Review in sections and after each was completed in draft form, it was to be provided for comment to the Chiefs of Staff of the Services and the Secretary of the Department of Defence. In the event, input was obtained from the highest level and, for the Services' part, invariably involved consideration by the Chiefs of Staff Committee and discussion with Mr Dibb. In addition, the Dibb team travelled widely around Defence establishments and spent time at sea. This approach encouraged sound two-way communications during the course of the Review.

AREAS OF SUPPORT FOR THE REVIEW

Mr Dibb has produced a well-structured study which is soundly argued for the most part. However, the sheer scope of the task has produced some areas of shallow analysis and assertion which will be discussed later. The broad principles on which the Review is built are as follows:

- Australia should strive for Defence self-reliance although it acknowledges that we will remain dependent on the USA for some military supplies and services.
- The Government should be consistent in its Defence budget allocation and financial forecasts. Mr Dibb considers that about 3 per cent of the GDP is a reasonable expectation for Defence.
- Australia should recognise that low-level military threats could emerge relatively quickly and be very demanding, but it would take many years for any country, other than a Superpower, to equip itself to attempt a major military assault on Australia.
- Mr Dibb also strives to formulate a strategy which reduces the opportunity for subjective interpretation and leads to a definitive force structure.

Generally these principles can be supported; however, some elements of the media have misinterpreted Mr Dibb's views on self-reliance and warning times because they appear to have ignored his conditional statements. Predictions about warning time must always contain a degree of judgement, but Mr Dibb qualifies what some might see as a sanguine outlook by stressing the credibility and demanding nature of credible low level contingencies.

The Review's approach to establishing a definitive force structure also seems sensible, and is aimed at eliminating most areas of disagreement within the Services, and between the Services and the Department. In determining capabilities, Mr Dibb first considers Australia's

enduring geographic features and then superimposes and examines credible defence contingencies. From these, he determines the size and shape of the defence force required to maintain superiority over other forces in the region. Mr Dibb cautions that this should be measured against regional capabilities rather than intent. Such an approach becomes a cornerstone of the Review and is reasonable as long as the full range of contingencies is considered, and are re-examined frequently against changing regional capabilities and strategic circumstances.

THE STRATEGY OF DENIAL

To provide the basis for definitive force structure proposals, the Review recommends a strategy of Denial. Initially, this may seem to be a sensible approach; it appears to leave little room for subjective interpretation, and it probably accords with what most Australians in this age of peace consciousness would see as an appropriately non-aggressive strategy. Certainly, Mr Dibb's strategic discussion is comprehensive and generally sound; he identifies a set of national security interests which includes Australia's regional role and a limited role in the protection of sea lines of communications — all of which can be supported.

But his decision to opt for a strategy of *Denial* appears to be overly influenced by the requirement to establish easily identifiable parameters which will lead to a definitive force structure; and this somewhat simplistic approach cannot be supported. Denial appears to be based on the sole premise of intrusions into the sea-air gap and low level raids on continental Australia. It does not consider or allow for other contingencies such as interdiction of shipping, Soviet intervention and build up in the SW Pacific, or the possibility of commitments to ANZUS.

Importantly, too, it does not provide a strategy for the peacetime employment of the ADF. Navy, in particular, has a vital peacetime role in the region, supporting diplomatic initiatives through the presence mission. The naval presence mission is not power projection; its primary objective in peacetime is the maintenance of regional stability and, during periods of tension, to avoid conflict through its impact on the political decisions of others. The strategy of Denial also lacks the necessary offensive aspect to guide ADF operations when the time comes to stop 'denying' and to start 'winning' the conflict.

In general therefore the proposed strategy can be viewed as excessively defensive and inward looking, and it does not acknowledge Australia's regional responsibilities. It could easily be interpreted by our neighbours and allies as the first step towards isolationism, which is contrary to our national interests, as well as the policy stated by the Minister.

AREAS OF CONCERN

Besides the disagreement over the Review's proposed strategy, there are other areas of concern, which appear to result from the sheer size of the task and the lack of sufficient military, and particularly maritime understanding within the DCR team. These areas of concern represent only a small portion of the Review but, regrettably, most are important to Navy.

The Review's scope and time-frame has led to inconsistencies in its determination of force structures, as well as superficial examination of the resource implications of its force structure proposals and the adversarial problems identified between the Services and the Department. In addition Mr Dibb was unable to conduct a detailed examination of Australia's dependence on trade and the possible requirement to protect shipping, and the conclusions he reached in this area were distorted by basic misunderstandings in the area of maritime operations, particularly the Fleets contribution to Strike and Interdiction and Anti-Submarine Warfare (ASW).

Force Structure Inconsistencies

A clear aim of the Review is to be objective and analytical in determining its proposed force structure and Mr Dibb is critical of the determination of the present force sizes, such as the 12-ship destroyer force. However, the task of analysing all areas of the defence forces was simply too great in the time available and subjective judgement was used to derive or confirm the size of some elements such as the amphibious force, the number of Army trucks and the Transport aircraft. Moreover, the Review does not provide any detailed analysis to support proposals for the size of the surface fleet or other ADF elements such as the F/A-18s, F111s and, most particularly, the size of the Army.

Inconsistencies in force structure determination are particularly evident when, after a broad capability requirement has been identified, subjective judgement is used to specify the actual numbers of units or men needed. A striking example is the generous recommendation that 56 helicopters are required to provide a company group lift for the Army — 23 to carry the company group, 6 for crew training, 7 as reserve to ensure the 23 are on line and 20 attrition aircraft. Such a calculation is

inconsistent when compared with surface combatants and afloat support forces where effectively no attrition, reserve or maintenance allowance is made.

Centralisation

The adversarial relationship between the Department and the Services was described by the Review as an institutional barrier hindering the development of Defence plans. To solve the problem, Mr Dibb proposed the transfer of the single Services' Operational Requirements and force structural policy staffs to HQADF Policy Division. No alternatives were examined or proposed, and the adversarial situation between the Services and the Department will continue to exist, because the Review never comes to grips with the real cause of the problems.

Resource Implications

In the area of resources, Mr Dibb aimed to prove the affordability of his recommendations in financial and manpower terms. He is critical of previous capabilities' reviews which have not done so and, in some cases, ended up with an impractical shopping list. Once again, the scope of this task was enormous, and too great for the time the Review team had available. As a result, their examination of resources is superficial, and 'ball-park' figures were used to demonstrate affordability. An example is the costing of the eight LPFs without accurate details of the ship. Recent Naval work indicates that 8 ships which fit the DCR proposed capabilities will probably cost about $3,600M, and not the $2,000M suggested by the Review.

Since the release of the DCR report the situation has been exacerbated by the ADF's and the Department's opposition to many of Mr Dibb's proposed cost and manpower saving measures, many of which were argued against during the course of the Review as being impractical, too optimistic or non-achievable. Considerable work is required to resolve this matter before the Review's proposals can be endorsed in a Defence White Paper.

Regrettably, the Review also does not acknowledge Navy's existing manpower shortfalls and difficulties, or the large backlog in the facilities area. The shortfall of suitably trained personnel, in particular, is a major problem in the Navy today, and the Review failed to grasp that it is this problem rather than budgetary constraints that will inhibit the development of existing naval projects and the adoption of its proposed initiatives.

Maritime Operations

From a naval point of view one of the most disappointing aspects of the Review was its failure to understand the concepts for maritime operations and, at times, even military operations. In discussing certain maritime scenarios, Mr Dibb tries to eliminate the element of risk; in doing so, he does not concentrate the forces at his disposal, and so makes the enemy's problem easier.

The Review underestimates the capabilities of surface ships and over-emphasises their vulnerability. Consequently, it does not use ships in the strike and interdiction role, and virtually removes the higher capability ships from the northern sea and air gap during higher level contingencies. In their place, Mr Dibb suggests using aircraft and submarines but he does not acknowledge their limitations, particularly those of aircraft operating at the outer limit of the Area of Direct Military Interest (an area defined by the Review as about 1000 miles from Australia's coast in all directions). The Review compounds this problem by not determining accurately the rates of effort, or the practicability, of aircraft achieving the envisaged maritime roles of strike, surveillance and air defence.

Similar misunderstandings are obvious in the area of ASW. The Review virtually dismisses the regional threat, and concludes Australia has a significant regional advantage in this facet of maritime warfare which it does not need to enhance other than by introducing towed arrays. While an overall regional advantage is acknowledged, the submarine still has the advantage and there is a pressing need to improve our capabilities in this area. Mr Dibb identifies a limited ASW requirement and in the focal areas specifies the LRMP aircraft and towed array as his preferred option. In doing so, he demonstrates little understanding of the considerable limitations of this combination, particularly in the shallow and noisy waters around most focal areas. Again, the Review fails to concentrate forces, which includes ships and helicopters, to counter the submarine.

In summary, the Review provides only a thin and intermittent line of defence in maritime operations. It does not make good use of surface ship endurance or ability to maintain a continual presence; it fails to use the offensive capability of ships; and, it simplifies the problems of any potential enemy.

His proposal for the LPFs as a new class is considered logical in providing a balanced surface fleet and it equates to the second tier of CNS' recently announced policy for the development of a three tier surface combatant force structure. The LPF's proposed capabilities — endurance, seakeeping ability and good surveillance supported by a helicopter, gun and air defence system — are also sound, but it is

unlikely they will fit into the 2000 tons standard displacement proposed by Mr Dibb. Sensibly, the size of the ship should be determined by the capabilities required and not vice versa.

Without an adequate understanding of maritime operations, it is not surprising that Dibb overlooks *Hobart's* capabilities and vital training role within the Navy. Instead the Review was heavily influenced by the financial and manpower savings to be achieved by paying the ship off, savings which would assist in balancing the demands of the Review's proposed new initiatives in other areas.

Importance of Trade and the importance of Shipping

A combination of the Review's narrow strategy, misunderstanding of maritime operations and a lack of time to conduct a detailed study has led it to a set of questionable conclusions in the area of trade and the protection of shipping. Mr Dibb virtually ignores the problem and its potentially significant force structure implications by making the following dangerous assumptions:

- Australia's economy is not particularly vulnerable to interdiction of our overseas trade.
- Northern Australia can be re-supplied by rail and road transport alone in time of conflict.
- Widespread interdiction of our overseas trade will only occur in global war.
- The enemy operations against our trade in open ocean areas, by a regional power, are assessed as unlikely.
- A deteriorating strategic situation will be recognised in time to stockpile.
- Stockpiles of vital products (munitions, lubricants, rubber etc) will be sufficient for the duration of the conflict.
- The submarine threat during ocean transits will be countered by evasive routing alone.

Some or many of these assumptions may prove correct, but it only requires *one* to be incorrect for Australia to be placed in a situation of grave danger in any conflict involving attacks on shipping. What is of greatest concern in this context is that some of the assumptions fly in the face of historical and recent experience; and, as Santayana has warned, 'those who do not learn from history are condemned to repeat it'.

CONCLUSION

Despite the apparent emphasis given to criticising the Review, it must be stressed that much of it can be supported; Mr Dibb's team produced a good result in the short time they had. The rush and lack of maritime experience produced the flaws from a naval perspective, and Mr Dibb's strategy of Denial needs rethinking.

The Review has not produced the revolutionary change that many pundits predicted from the broad principles initially put forward by the Review team. Rather it is a continuation of many Defence initiatives which are currently underway. In some respects it is a logical follow-up to the 1976 Defence White Paper, and it provides a sensible basis for the Navy to build for the future.

The Author

Captain Oxenbould graduated from the RAN College in 1966 and followed the normal training pattern for Seaman Officers. In 1973 he sub-specialized as a PWO N and went on to serve as Navigating and Operations Officer in *Torrens*, *Hobart*, *Duchess* and *Supply* as well as serving on the staff of the Fleet Commander, COMAUSMINPAB and the Navigation School at *HMAS Watson*. He commanded *HMAS Canberra* during 1984–85 and on leaving the ship was promoted to Captain and joined the Naval Plans and Policy Branch of Navy Office in January 1986, as part of a working party to staff the Dibb Review. Captain Oxenbould presently a student on the Naval Command Course at the US Naval War College, Newport, RI, USA.

DEFENCE 1986

By L.W. Forget

SYNOPSIS

Mr Dibb recently concluded that the Australian Defence Force structure should revolve around the premise of defence out to a maximum perimeter of 1000 kilometres only. The considerations addressed by him in forming this conclusion are not fully known but obvious strategic and cost factors certainly rated highly in his academic and political study. The conclusion that a 'continental defence' policy is appropriate for Australia can also be reached by considering

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a different perspective of Australian Defence 1986.

DISCUSSION

Australian fighting forces have a reputation for effectiveness ranging from the Boer War through to the Vietnam conflict. For those who have survived the terrors of those experiences, any thoughts that a grateful nation would automatically take care of them have been tempered with a somewhat different reality. The extensive publicity given to the diminishing benefits of war veterans and to the diminishing compensations for a life in the Armed Forces, must have some effect on those serving or about to serve? Those joining today will be paid at similar levels to the community at large and mostly will have similar expenses to contend with. There are no obvious substantial compensatory benefits for a life of family upheaval and for possible death in combat; a death for which less and less concern is being demonstrated by those bureaucrats who would consign them to battle. The question will be asked, 'why fight?' The answer might be, 'if the rest of the community is not, then I won't'.

Such thoughts leading to a refusal to fight when a nation is at war constitute treason and have been treated accordingly in the past, except when grounds for 'conscientious objection' have been established. With present society values, and the 'trade union ethic' ingrained into the Australian psyche through constant media publicity, the establishing of 'reasonable grounds' for non-participation in combat scenarios is likely to be much easier to achieve for any future national crisis. This is likely to be so for both Service personnel, and civilians in the typical conscription situation.

Poor support of Australian forces when seconded to foreign military Commands in action; recent changes to veterans entitlements via a new Bill; the poor treatment of 'agent orange' sufferers; the lack of loyalty to Australian naval officers when *HMAS Melbourne* was subjected to collision on two separate occasions; and general pay and conditions which are barely comparable with the community at large; these are all reasons for taking no more risks than those that the general community is prepared to take.

The one time that the general community might be prepared to take up arms and fight, which by the above argument would be when the permanent defence force personnel who form the nucleus of the 'profession of arms', would also be prepared to fight, is when they feel that their livelihood is directly threatened. Such an occasion would be when continental Australia is threatened by a hostile foe.

The perception that individual Australians in the Armed Forces will only fight effectively when they themselves have something to lose by not fighting, is an astute one, because at such times those personnel will overlook the historical lessons which predict that the Australian Nation 'Will Not Remember Them'. The trade union ethic will not be significant when the man and all that is his is directly threatened! He will be fighting for himself primarily and will fight regardless of whether the nation decides to provide post battle support, or not.

A Defence strategy for Australia which capitalised on this realisation could save a lot of money for the community at large. No special pay and conditions or compensations would be required for the 'Profession of Arms'. The Government would constrain the National Defence Strategy to a region in the immediate vicinity of continental Australia and that would also have the side benefit of requiring less costly defence equipment. Combat in this region would be 'real self-defence' and all Australians would have self interest in the outcome. Volunteers would not be hard to find should it ever be put to the test!

CONCLUSION

From more than one point of view a 'continental defence' policy for Australia is a logical step, whether or not the national qualities considered in reaching this conclusion are admirable.

THE DEFENCE STANCE

By Corporal M. Andrew, RAAF

This article is not to dismiss the Dibb Report in its entirety. Some parts of the Report give sound and practical recommendations to the future direction of the ADF. These are the equipping of the Air Force with more utility helicopters to provide for an airmobile battalion, the upgrading of our northern defences, an increase in mine countermeasures capability, light frigates for the

Navy, more transport aircraft and two extra Jindalee long range radars. However, there are recommendations that are unsound: the reduction in the F–111C force's avionics update, the cancellation of their precision guided munitions and electronic countermeasures and the proposal to replace the F–111Cs by F/A–18As. The lack of strategic direction for the mechanized brigade, the lack of any close air support aircraft and the lack of any strategic strike role for the new submarines is also of concern.

The major problem with the Report is its emphasis on the Strategy of Denial (pages 5 and 49 to 52 of the Report). This strategy involves denying the sea and airspace around our continent for use by an opposing force. Though sound, this utilisation of the distances involved in attacking the Australian mainland and the Cocos and Christmas Islands forgets that distance is a two-edged weapon. Firstly, unless we initiate a first strike we could not guarantee a timely response in isolated areas. Secondly, being essentially a defensive strategy, we are obliged initially to let the aggressor call the tune.

If all the recommendations were to be carried out a strategic vacuum will be created, giving any aggressor a strategic advantage. The aggressor will be able to commit the majority of his airpower knowing that his home bases will be secure against attack. This statement is justified by the Report's recommendation to reduce land strike as a future priority for the Australian Defence Force.

The emphasis on the Strategy of Denial also tends to be short-sighted with regard to our regional responsibilities. The Strategy of Denial gives the impression that we will wait for the enemy to strike at our neighbours before we would react. I believe it was Bismark who quoted: 'It is better to fight the enemy on someone else's soil'. Australian forces should be co-located with our neighbours or have the ability to support them when necessary, as this would act as a 'tripwire'. An aggressor's realisation that any action involving Australian forces would escalate to where external forces involvement could occur, would reduce his desire to initiate a strike against an Australian force's host country. Furthermore, the capability to be able to strike at an aggressor's home bases has a Force Multiplier effect. It forces an aggressor to station a proportion of his defence forces for territorial defence at the expense of forces involved in offensive operations.

This article will show that the recommendations regarding the reduction of strategic strike capability, the lack of close air support aircraft and the proposal for replacing the F-111C with the F/A-18A are unsound. They would actually reduce the effectiveness of the Australian Defence Force. The lack of a strategic role for the new submarines and the strategic deployment of the mechanised brigade will also be discussed.

The F-111C FORCE

Pages 120 to 123 of the Report deal in detail with Strike and Interdiction. With the Report's reduced policy towards land strike, reduced capabilities for this mission are recommended. These include a reduction of $69M for the avionics update, no modernizing of the electronic countermeasures (at a saving of $60M) and no precision guided munitions (at a saving of $62M). These recommendations are false economies. They not only reduce the capability for land strike but also for the Report's priority mission of maritime strike. The primary roles of the F-111C are Strategic Strike and Strategic Reconnaissance. This means operations outside the range of the Tactical Fighter Force ie. taking the battle to the enemy. To ensure that this capability is maintained, the F-111C fleet requires an update program.

The avionics update program mentioned in the Report will be based on the US Air Force's currently running F/FB-111 Avionics Modernization Program. This program is designed to bring commonality and increase the overall reliability in the avionics systems throughout the USAF FB/F-111 fleet[1]. The equipment currently installed is becoming difficult to maintain due to the age of the technology used and the differing equipment fits on the aircraft. Primary to the update is the attack radar, which is an enhanced version of the APG-67 radar used on the F-20 Tigershark. The APG-67[2] is a multi-mode radar. Its two air-to-air modes are look up/automatic tracking and look down/automatic tracking. Its four air-to-surface modes are air-to-ground ranging, expanded ground mapping using doppler beam sharpening and freeze mode and two sea-search modes. One uses frequency agility techniques capable of detecting a 50m^2 target at 64km in sea state 1 and the other uses coherent target movement to detect the same size target at 55km in sea state 4.

The terrain-following radar will be a repackaged version of the current radar. Utilizing technology from Texas Instruments LANTRIN radar system, the TFR will remain the same except for a new computer and transmitter as the reliability of the system as a whole is satisfactory. Other updates include a new combined altitude radar altimeter, weapons/navigation computer, micro-electronic converter, standard medium-accuracy INS airborne VTR, integrated comms/

nav/identification system, multifunction display set, Navstar GPS and several control panels. A reduced avionics update could make the aircraft unsupportable. Having unique outdated equipment dependent on overseas supply is useless. By the mid 1990s the USAF's avionics update program will be finished. This would force our F-111C force to be scrapped as the cost of an unique update would not be cost effective due to the remaining life of the aircraft.

The Report recommends that the F-111C can be used as a maritime interceptor to intercept aircraft shadowing our naval vessels. Though capable of fulfilling the mission, the use of a strike asset as an interceptor if equipped with only shortrange tail-chasing Sidewinder AIM-9B missiles is a waste of a valuable resource. The F-111 has to manoeuvre at extremely close range behind the target before it can hit it with its missiles. The 20mm cannon available likewise requires the F-111C to get in close for a kill. As enemy shadowers use radar to maintain surveillance of fleets, an F-111 sent out to shoot down the shadower could be detected and the shadower could fly out of range till the F-111 returned to base. The only effective solution to remove shadowers is to have organic air defence aircraft onboard naval vessels, as proven since 1939. Since the Navy is unlikely to get a fixed wing aircraft in the forseeable future the avionics update should try and provide something better than Sidewinder.

The F-111C's new radar should be equipped with a continuous wave (CW) illuminator. This has already been installed on the F-20 Tigershark and would allow the F-111C to be used as a proper, long range fleet defence fighter as mentioned in page 133 of the Report. Presently equipped with only Sidewinder AIM-9B short range air-to-air missiles (SRAAM), the aircraft would be able to use AIM-7M Sparrow medium range air-to-air missiles (MRAAM) as used on the F/A-18A. The Sidewinder AIM-9B is a short range (circa 3km)[3] missile utilizing an Infra-Red (IR) seeker to home in on an aircraft's engine heat. The Sparrow is a radar guided all aspect and height 50km range missile[4] using radar illumination to home on a target. It enables stand-off range attacks thus not requiring an F-111C to manoeuvre close to its target. The missile also allows multiple target engagements and gives aircraft on strike missions a credible self defence against enemy aircraft. Similarly, the fitting of Sidewinder mounts on the shoulder of the inner pivot pylons gives a self defence capability on all missions with no loss of pylon space.

The recommendation to drop proposals for acquiring precision guided munitions (PGMs) and updating the electronic countermeasures system (ECM) for the F-111C is shortsighted. The Report gives as reasons, insufficient priority in our strategic circumstances, short lead times for the acquisition of PGMs and a reduced policy for strikes against land targets. The Report's policy of insufficient priority in our strategic circumstances and the policy for reduced strikes against land targets cannot justify this proposal. Nor can the reason of short lead times for their acquisition. PGMs are for the most part multi-target weapons and given the strategy of stopping aggressors in the '1000 Mile Moat', it seems strange to cancel programmes designed to increase our attack capability against these same targets. The same PGMs are used on the F/A-18A so they would still have to be acquired. The reduction in cost is negligible as the money would be transferred from one program to another. A case of robbing Peter to pay Paul.

The Report's reliance on the Harpoon missile could be counterproductive. The missile's radar seeker would not necessarily hit the target selected if multiple targets were present and it, like all radar seekers, is vulnerable to electronic warfare (EW). The weapon can only be used on maritime targets and the relatively small warhead can not guarantee a kill on all targets. The future fitting of an imaging infra-red (IIR) seeker will allow selectivity of naval targets and the attack of land targets, though it will be an expensive way to deliver a 222kg warhead[5]. Also the Harpoon cannot at present be fired at its full operational range by the F/A-18A.

The introduction of Close-In Weapons Systems (CIWS) in naval fleets of the world has reduced the ability of cruise missiles like the Harpoon and glide bombs to penetrate shipborne defence systems. To enable attacks against naval and land targets to be conducted with reduced losses, a combination of ECM and a defence suppression weapon is required. Only one weapon has the stand off capability to perform this mission. This is the anti-radiation missile. Of the many versions produced over the years only two missiles are readily available. One is the AGM-88A HARM and the other is the ALARM[6]. The HARM is larger than the ALARM but this allows a greater stand off range and larger warhead. The ALARM is still under development but its major advantage is that it fits on Sidewinder pylons. For example, where the F/A-18A could carry one HARM on an outer wing pylon it could carry two ALARMs. The shoulder mount on the inner pivot pylon allows each F-111C a defence suppression capability but HARM would have to be carried on a pivot pylon.

There are many targets that are matched to munitions with a stand off capability but not necessarily one in the cost region of a GBU-15

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(US$128K)[7] or an AGM-84 Harpoon (US$1.5M)[8] in service with the RAAF. The US Navy has developed the AGM-123A Skipper 2, which comprises the standard Paveway 2 Laser Guided Bomb (LGB) kit and a rocket motor married to a standard Mk 83 450kg bomb. The maximum range of the Skipper 2 is 16.5km, this being the maximum effective range of laser homing and its cost is US$22K[9]. The Paveway 2 LGB is already in service in the RAAF and the Skipper 2 is type standard on USN F/A-18As. An F-111C could carry two, one on each inner pivot pylon, and still have the outer pivot pylons free. The use of GBU-15, Skipper 2 and an anti radiation missile, will ensure survivability with one shot kills on destroyer type vessels and severe damage on larger vessels. Harpoon would still be used on maritime targets which have medium and long range SAMs. The GBU-15 and the much lower cost Skipper 2 have smaller ranges (8km and 16.5km) than the Harpoon (100km). They would be used against maritime targets equipped with short range SAMs to avoid the target's missile engagement zone (MEZ). Defence suppression techniques and anti radiation missiles would have to be used against targets with large MEZs. Thus both the F-111C and the F/A-18A will become more effective by the acquisition of PGMs.

The key to any successful strike is the ability to avoid or suppress the target's defences. An ECM system designed in the mid 1960s would, due to technological changes, be very limited against current weapons systems. The best example of this is the Yom Kippur War of 1973 when Israeli forces were initially unable to suppress Surface to Air Missile sites by electronic or physical means. Given that PGMs and ECM could be acquired at short notice, major problems would still occur. New equipment requires a learning period to enable operators to use it effectively. Just the buying of a new weapons system doesn't mean that the aircrew who use it, the ground crew who maintain and in the case of ECM also program it, will use it to its best advantage. Limitations of the system, tactics and maintenace all have to be learnt from scratch as there will be times when suppliers do not want to be actively involved. In addition, off-the-shelf ECM systems would invariably be podded systems thus reducing pylon space available for weapons carriage and introducing mixed load compatability problems. If, during a confrontation, a strike has to be initiated, having the weapons and ECM systems on hand and the capability to use them are decided advantages. New ECM, in conjunction with Pave Tack will allow the F-111C to destroy large naval targets and airfields without resorting to using expensive Harpoon missiles or suffering severe losses.

CLOSE AIR SUPPORT

The Report states on page 142 that Close Air Support (CAIRS) aircraft are not required. The Report goes on further to state that the fire support role can be provided by suitably equipped UH-60A Blackhawk utility helicopters. Given that the future operations of the Army will be centred around light infantry in the airmobile role, *there are two major requirements for fire* support. Firstly, suppressive fire is required during the landing phase of an operation to reduce casualties from opposition weapons. Secondly, as airborne forces lack inherent protection once landed, there is a need for heavy weapons fire to negate the possibility of the forces landed being overrun before defensive positions are established.

Blackhawk helicopters in use by the US Army are equipped with single gun mounts for the M-60D machine gun, the same weapon as used on the Iroquois helicopter which the Blackhawk will replace in the RAAF. Though adequate in Vietnam, in operations where the enemy has anti-aircraft weapons they lack the volume of fire, range and penetration needed. This was demonstrated during the US operation in Grenada[10]. F/A-18A Hornets operating in the CAIRS role lack the immediate on-call fire support capability required as they are unable to operate from forward airstrips. Unless the battle is near airstrips capable of taking F/A-18, the time taken to answer a CAIRS request will *probably be too late for the requestors. The only* way the F/A-18 can provide on-call CAIRS is to loiter over or near the battlefield, thus providing an inviting target for enemy air defences. This method is extremely non-cost effective as it increases flying hours, thus increasing maintenance requirements and tying up scarce air-to-air refuelling assets. Thus the use of the F/A-18A for CAIRS in airmobile operations is marginal at best.

The only cost-effective options for providing CAIRS are: giving every Blackhawk an increased suppressive capability; equipping some Blackhawks as gunships as currently done with the Iroquois; or buying attack helicopters or CAIRS aircraft.

The first option of giving every helicopter increased suppressive fire capability has the adverse effect of increasing the helicopter's weight thus reducing its lift capacity and internal volume. Two representative weapons are the GAU-2A/B 7.62mm three barrelled minigun[11] and the GECAL 50[12] three barrelled machine gun. Both weapons work on the Gatling principle with the GAU-2A/B firing at approximately 2,000 rounds per minute and the GECAL 50 firing at approximately 1,000 rounds per minute. Both

installations would be bulky and heavy due to the amount of ammunition required.

The second option is to employ some Blackhawks as gunships. As the US army has the AH-1S Cobra and the AH-64A Apache attack helicopters there has been no requirement for the Blackhawk to be armed as a gunship. This means Australia will have to conduct clearance trials for any gunship kit purchased. As the gunship kits are add-ons, they increase the vulnerability of the helicopter to anti-aircraft fire. Already a large soft target, the add-on nature of any weapons selected precludes the fitting of any heavy automatic weapons due to the balance, weight and recoil problems associated with side-mounted weapons. This forces the helicopter to turn around to face any threat and close in to achieve kills as the lighter weapons lack accuracy and penetration at stand-off ranges. Although better than the first option, it still does not give effective CAIRS against threats with anti-aircraft weapons or armour. The latter could be remedied by the fitting of ATGW. This means that the helicopters involved would become dedicated anti-armour helicopters due to the cost and complexity of fitting of the sights and fire control systems to enable the firing of ATGW.

The third option is to purchase fixed or rotary wing CAIRS aircraft. Only two fixed wing CAIRS aircraft are available which fulfil the requirement for operation from forward airstrips. They are the Royal Air Force's Jaguar GR 1 and the US Air Force's A-10 Thunderbolt 2. Both however, are out of production and have seen hard use. Some of the Jaguar GR 1s in use by the RAF are due to be replaced by the Tornado GR 1 and then are to be offered for sale or mothballed. As the aircraft is out of production, spare parts will become expensive to acquire. Further, since the individual aircrafts' histories are not available their purchase is not viable. For the same reason (and because the USAF is still operating the A-10) its acquisition is also ruled out. As fixed wing aircraft are not viable, the only alternative is to purchase rotary wing aircraft, that is Attack Helicopters.

There are two attack helicopters which will be in production in 1988. These are the US Army's AH-64A Apache and the Italian A-129 Mangusta (Mongoose). The Apache utilizes the same engine as the Blackhawk. Agusta, the manufacturer of the A-129, could provide a re-engined version to ensure engine commonality. Both helicopters are inexpensive in CAIRS terms, the Apache costing US$8.5M[13]. The

RAAF R/A–18A equipped with Sidewinder AIM–9L missiles and drop tanks.
(Photograph courtesy of author).

Apache has greater running costs due to it being larger and more complex. Its integral armament is a 30mm chain gun whereas the Mangusta uses a 12.7mm machine gun. Both helicopters can carry ATGW with the Apache fitted for the AGM-114A Hellfire and the Mangusta the BGM-71 TOW[14]. With eight of their respective ATGWs the helicopters can also carry 38 70mm rockets. The rockets, and gun ammunition suitable for both helicopters are already in service in the ADF. Thus, both helicopters are capable for the CAIRS roles and the suppressive fire mission. The threat evaluation and their running costs would need a full evaluation coupled with tests in hot/high environments before a decision could be reached.

THE FUTURE OF THE RF/F-111C FORCE

It would appear the argument put forward by defence academics in the mid-seventies and early eighties, acquiring larger numbers of austere platforms at the expense of a smaller number of more comprehensively equipped platforms, is coming around to reality in the proposal to replace the F-111C with more F/A-18As. It was thought that the idea of austere platforms had died a natural death. The results of the Israeli invasion of Lebanon[15] and the British actions in the Falklands in 1982[16] showed that comprehensively equipped platforms in attack and defence will succeed where austere platforms will fail or suffer crippling losses. In the period 6-11 June, the Syrian Air Force lost 82 aircraft, 12 helicopters and 19 SAM batteries due to the superior equipment and electronic warfare used by the Israelis. During the Falklands War, despite being handicapped by their lack of superiority, the British lost only six ships whereas the Argentinian Air Force and Navy lost 109 aircraft at the hands of the British Forces.

The proposal to use the F/A-18A as a replacement for the F-111C invokes what I call the 'Wirraway Syndrome'. This is when an aircraft is bought for one role and is then used in roles it was never designed for, or modified for a role for which it is unsuitable. This evokes the memory of the Wirraway trainer when it was pressed into service as a fighter, bomber and reconnaissance aircraft during the Second World War. The Mirage is another case, although it was modified by the manufacturers for the ground attack role. Page 20 of the Report describes the Mirage as having virtually no strike capability. When you start hanging bombs off it, the range reduces considerably.

The F/A-18A, while being an excellent strike aircraft within its radius of action, is still no match for the payload/range of the F-111C. An F/A-18A with four Mk 83 450kg bombs has a strike radius of 1050km[17] whereas the F-111C with the same payload has a radius of 1920km[18]. These figures are for a F-111C using internal fuel only. With external fuel, it would have a still larger radius of action. In maritime strike, the F-111C's ability to carry the GBU-15 and 900kg LGB is superior to that of the F/A-18A. Its greater radius allows attacks at greater ranges from the coastline and from different directions, thus compounding an aggressor's defensive problems.

If the F-111 force was to be replaced, Strategic Reconnaissance would become far more expensive then present. The RF-111C is the most capable and survivable low-level, long range supersonic reconnaissance aircraft in the world, except for the USAF's SR-71 Blackbird and F-19 COSIRS (Covert Survivable In-weather Reconnaissance Strike) 'Stealth fighter'. Even the Report admits that another aircraft may have to be purchased if the F-111C fleet was to be disposed of. To provide survivable reconnaissance out to 1500 NM to meet our surveillance requirements is not possible with an F/A-18A(R), so a new aircraft would have to be purchased. Since such a replacement is not available, the four RF-111Cs would have to be kept in service. Maintaining and operating only four aircraft of such sophistication would be an extremely uneconomical proposition.

If more F/A18As were purchased to replace the F-111Cs, more air-to-air refuelling aircraft would be needed. Without this capability, flexibility in attack directions and profiles would be limited. If, as the Report suggests, a squadron of F/A-18s should be dedicated to maritime strike, an air-to-air refuelling fleet of four to six aircraft would be required. Second-hand Boeing B707 aircraft in a condition acceptable for use in air-to-air refuelling are rapidly diminishing. The possibility of having to acquire another aircraft type would have to be considered. This would add to the running cost of the transport force due to the logistic problems of having two differing aircraft types performing the same mission.

General Dynamics, during the proposals to the USAF for the update of the F-111's avionics, released figures to show that the best replacement for an F-111 was another. With a typical payload of 2720kg (twelve Mk82 226kg bombs) the F-111 can fly a radius of 1830km[19]. By comparison, with the same payload, the F-16A has a radius of 640km[20], the F-4E a radius of 460km[21] and the F-15E a radius of 1100km[22]. The F-111 with a maximum payload of 10890kg (forty-eight Mk 82 226kg bombs) has a radius of 640km[23]. The US Secretary for the Navy was quoted as saying, that the radius of a F/A-18A with a payload of four Mk83 454kb bombs in a Hi-Lo-Lo-Hi attack profile is approximately 640km[24]. As this figure is taken when launched

from an aircraft carrier, it can be taken that the payload/range of the F-16A and the F/A-18A are approximately the same.

A quick cost benefit analysis shows that for major procurement plans, the ten years in the Dibb Report is insufficient. To replace the F-111 strike component by 25 F/A-18s is not cost effective. The infrastructure currently used for the F-111 force would have to be kept substantially intact for the four RF-111s. The cost reduction is actually an increase in terms of maintenance as personnel would still be needed for the new F/A-18s. The new F/A-18s to be procured in the mid 90s may never exist. To be called the Strike Hornet it would be a TF/A-18 modified with more attack avionics, more fuel and a bigger wing. It was designed as a replacement for the A-6 Intruder, but this aircraft is to be kept in service and stay in production. In the mid 90s the new Advanced Tactical Attack aircraft should be in production and become available for export in the late 90s. This will be superior for the strike mission and available to replace the F-111 at the end of its service life if the full avionics update is performed.

If the F-111 force is updated and kept in service there will be no requirement for more air-to-air refuelling aircraft for the maritime strike mission. This would give a substantial saving in acquisition and running costs. Thus the future cost for the strike force will be reduced if a full update is proceeded with as planned. This is due to not having to fund the extra F/A-18s to replace the F-111 force which would have just completed the reduced update recommended in the Report, if the full update is proceeded with.

THE SUBMARINE FORCE

The submarine force as mentioned in pages 122 and 123 of the Report should not be downgraded in any respects. The submarine force could become the first line strategic strike force. Both contenders for the submarine update, Kockums of Sweden and HDW/IKL of West Germany are developing engines capable of allowing the submarines to stay submerged for extended periods of time. In addition to the Mk48 torpedo and Harpoon missile, the Tomahawk cruise missile should be purchased. This would give a strike capability against any land or sea threat in the region. It would also allow Australia to support regional powers in times of emergency. By being the 'unseen threat', the submarine force could curtail an unfriendly force's idea of initiating an attack. Knowing that his own territory could come under retaliatory attack immediately any hostile action was initiated, would hamper any Military Planner's thoughts of aggression.

Kockums have developed an air-independent propulsion system based on the Stirling engine[25]. Presently, a Swedish submarine is being equipped with a Stirling engine for trials to validate the concept. Kockums hope to have a submarine with an all-anaerobic (air-independent) propulsion system in the late 1980s. Kockums claims such a fit will allow an endurance (without snorting) of up to ten times that which can be achieved with conventional propulsion. IKL, HDW and Siemens are collaborating on a prototype fuel-cell system. The fuel systems are fed with liquid oxygen and hydrogen stored in the form of metal hydride. Stirling engines use liquid oxygen (LOX) as a fuel. HDW hope to put a fuel cell engine in a Type 209 submarine of the FRG Navy in 1987 to test it at sea. Either of these sytems, if successful, would greatly increase the operational effectiveness of the submarine proposed for Australia. They would give a similar underwater endurance to nuclear submarines.

To take advantage of the air-independent propulsion system's underwater endurance, the acquisition of a land attack weapon would be operationally desirable. As reasoned earlier, a land attack cruise missile would increase the operational flexibility of the submarine force. To be mission capable, a complement of six Tomahawk missiles would be required. A mixture of unitary warheads incorporating Fuel Air Explosives (FAE) and warheads dispensing sub-munitions would be necessary. If FAW warheads were unacceptable, the current 450kg HE warhead could be used. The FAE, and to a lesser extent the HE warhead, are capable of destroying hardened point targets. The FAE will cause much more blast damage on area targets. To destroy certain targets sub-munitions are more effective. The destruction of runways is best performed by sub-munitions as are SAM sites.

Although these missiles are not of value against large concentrations of military hardware, their ability to knock out selected targets would give an invaluable surgical strike capability. Targets like SAM sites, radars, runways, bridges and C31 centres could be neutralised or destroyed at the outbreak of hostilities. This would reduce an aggressor's ability to conduct operations. Tomahawk could be used to suppress defences before an air strike. The threat that would be posed by Tomahawk would act as a force multiplier. It forces a threat to disperse his air defence aircraft to avoid them being knocked out in a single strike, and to disperse his other air defence assets to protect possible targets. Tomahawk also gives the Navy a land strike capability lost since the retirement of *HMAS Melbourne*. The missiles also have a dual purpose. If a

lodgement was made on Australian soil, the ability to destroy runways and logistic areas at short notice is advantageous. If an aggressor who landed on the Cocos or Christmas Islands had air superiority, Australian reaction would be difficult. A surprise strike by cruise missiles on an aggressor's facilities on the islands would pave the way for an Australian counter-action.

The major operational problem posed by Tomahawk missiles is whether they would be used through torpedo tubes or on vertical launchers mounted in the hull. The missiles, if mounted in vertical launchers in the hull, will add weight and cost to the submarine itself but not reduce the anti-ship weapons available onboard. A BGM-109/C Tomahawk has similar dimensions to a Mk48 torpedo[26] so there are no problems in launching them from torpedo tubes. In strikes against land targets, Tomahawk has a range of over 731km[27] so deep strike missions are possible. The cost of a Tomahawk is US$2.44M[28] and the extra cost to modify the submarine is dependent on the launching method. Compared with the program cost of Aust$2.6B stated in the Report, it is negligible.

The F-111C update and the proposed equipping of Tomahawk missiles to the new submarines, would enable Australia to provide our neighbours with fire support and engage threats well beyond our shores. To show support for our neighbours against external threats, the basing of forces in the region should be maintained. My proposal is to base a mechanized brigade in Thailand.

MECHANIZED BRIGADE

The Report contends that tanks have limited use in the defence of Australia. Then the tanks with supporting vehicles should be moved where they serve Australia's strategic interests best. Thailand is presently facing a large threat from Vietnamese forces[29] in Kampuchea and is having difficulty funding a purchase of a new Main Battle Tank (MBT)[30]. My proposal has the 1st Armoured Regiment deploying with 5/7RAR to an area between Bangkok and the Thai/Kampuchean border. By stationing the 1st Armoured Regiment and 5/7RAR there, many problems would be solved.

The Australian Army has limited overseas postings and training areas for large scale armoured operations. Stationing the Brigade in Thailand will remove the problems of training areas and regional nations would see Australian resolve to defend the region. To reduce operating costs, a squadron of the Regiment and a company of the Battalion would be rotated every three months. Within one year, the Brigade would be conversant with the operating area. The opportunity to travel overseas every year would increase retention of personnel in these units. A small headquarters would be permanently stationed in the area for the upkeep of the unit.

Basing the Brigade well to the rear of the border area would allow its use as a counter-penetration force to contain any breakthrough of the border area by Vietnamese forces. To bring the Brigade up to full strength in the event of hostilities would only require the use of civil air. The Brigade would only have to fly the personnel in, as all the heavy equipment would already be in the area.

The Leopard MBT is superior to any other MBT in the region[31] and with the M–113, presents any aggressor with a problem in armoured engagements. By utilizing knowledge of the terrain and known choke points, the Brigade should be able to blunt any attack of up to divisional level. This would give time for Thailand's reserves to be mobilized and US reinforcements to be flown in.

If the Report's recommendations regarding the restructuring of the 1st Armoured Regiment are carried out, Australian forces provided to support a regional neighbour could be short in combat power. The assistance required would be for well-equipped, heavily armed forces. Our South East Asian neighbours have sufficent light forces to cope with any threat short of a large scale armoured thrust[32]. The restructuring of the Army for light airmobile forces does allow for their use in the counter penetration role against massed armour. However airmobile forces lack inherent protection and the time taken to fly the helicopters to the theatre of operations precludes rapid deployment. The British Army's involvement in airmobile anti-armour operations[33] saw the infantry battalions involved being scaled for a huge number of Milan anti tank guided weapon (ATGW) launchers. The same weapon is used by the Australian Army. The Australian Army's present holding is 10 launchers and a British airmobile battalion is equipped with 42 launchers. If the Army is to become light enough for airmobile operations, an expensive purchase of ATGWs is required, though not necessarily to the British Army's scale of issue.

The Report's lack of recommendations regarding anti-armour is notable given the paucity of modern anti-armour weapons in the Australian Army. The best option to support our regional friends is to base the mechanized brigade in the region. The movement towards light forces should be tempered with the knowledge that they lack staying and firepower.

CONCLUSION

In conclusion, the capability to strike at an aggressor's territory must be maintained. Without this capability we do not have the deterrent capability and the force multiplier effect which this gives. The ability to take the battle to the enemy must be one doctrine the Australian Defence Force maintains. The Dibb report lacks this doctrine and it is the major error in the Report. If carried through, the Report's downgrading of Australia's counter-strike and offensive capabilities will tie the hands of the strategic planners of the future.

Notes and Acknowledgements

1. Aviation Week and Space Technology 2 JAN 1984, p62.
2. Janes Weapons Systems 85–86 Ed, p58.
3. Janes Pocket Book no 10 Missiles, p222. The AIM–9M fitted to the F/A–18A has a 16km range. Ref. Janes All the Worlds Aircraft 85–86 Ed. p 839.
4. Aircraft Armament Vol. 2 Interavia 1982 Ed. Pt3 USA 16.
5. Janes All the Worlds Aircraft 85–86 Ed. p 839.
6.

	Length (cm)	Missile Diameter (cm)	Launch Weight (kg) (with launcher)	Wingspan (cm)
AGM–88 HARM	418	25.4	366	113
ALARM	400	25	280	75

Ref. Janes All the Worlds Aircraft 85–86 Ed. p839. International Defence Review 5/85 pp 765 & 786

7. 1985 Price. International Defense Review 5/86, p 681.
8. 1986 Price. Aviation Week and Space Technology 17 Feb 1986, p 117.
9. International Defense Review 6/86, p 804.
10. International Defense review 7/85 pp 1163–1165 Grounded Gun Looks For A Sponsor.
11. Aircraft Armament Vol.2 Intravia 1982 Ed. Pt 1 USA 24 & 25.
12. International Defense Review 7/85, p 1163.
13. 1986 Price. Aviation Week and Space Technology 17 Feb 1986 p 117.
14.

	Range		Guidance
BGM–71 TOW	19	3750	Wire
AGM–114A Hellfire	45.7	6000	Laser

Sources: Janes all the Worlds Aircraft 85–86 Ed. p 839, Author's own notes.

15. Military Technology 7/84 p 32, International Defense Review 8/82 p 980.
16. Argentinian losses were 109 aircraft including 41 to SAMS and 31 to Sea Harriers in air to air combat with no loss to the Sea Harriers. ref. International Defense Review 8/82 p 980.
17. McDonnell Douglas figures.
18. Author's own figures.
19. Flight International 9 JAN 1984 p 77.
20. Ibid, loc cit.
21. loc cit.
22. loc cit.
23. loc cit.
24. Armed Forces International April 1986 p 23.
25. Diesel Electric Submarines and Their Equipment. Supplement to International Defence Review 5/86 pp 48 & 49.
26.

	Diameter (cm)	Length (m)	Weight (kg)
Mk 48	53.3	5.8	Approx. 1600
BGM–109/C	53	6.4	1500

Ref. Janes Weapons Systems 85–86 Ed. pp 86 & 936. Military Technology 4/83 p 76.

27. Janes Defence Weekly 10 May 1986 p 821, a maximum range of 1500km is quoted in Military Technology 4/83 p 76.
28. Aviation Week and Space Technology 17 Feb 1986 p 117.
29. M.K. Andrew. Threats and Responses: Singapore and Thailand. Journal of the Australian Naval Institute May 1985 pp 33–37.
30. Janes Defence Weekly 17 June 1984 p 1197.
31. The Main Battle Tanks in the region are the M-48A5, T-54, T-55 and T-62.
32. M.K. Andrew. Threats and Responses: Singapore and Thailand. Journal of the Australian Naval Institute May 1985 pp 33–37.
33. B.W. Barry. The Airmobile Battalion. British Army Review No 79 pp 5 to 13.

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THE STRATEGIC BALANCE IN THE ASIA-PACIFIC REGION: NAVAL ASPECTS

By Lieutenant A. Hinge, RAN

INTRODUCTION

Naval developments in the Asia-Pacific region are dominated by the continued rivalry of the two superpowers and the influence each is perceived to have in the area. The maritime strategies of Japan, the People's Republic of China (PRC), ASEAN countries and Australia are invariably developed against the backdrop of a clear US naval dominance of the entire region and a need to respond to an increasing Soviet naval presence.

US naval dominance of the region is quietly welcomed by the non-communist nations and the PRC. At the same time, many of them feel comfortable with a policy of 'equidistance' in terms of not being seen to embrace the American presence too closely. In effect, they accept the Pacific as an American 'lake' and, in their own ways, are working to maintain this accommodation with the Americans for the mutually advantageous purpose of limiting Soviet ambitions in the region.

In the north the islands of Japan remain the decisive US bulwark against SOVPACFLT expansion into the Pacific and Indian oceans. It is for good reason that Japan has been likened to an 'unsinkable aircraft carrier' since its favourable geographic situation underpins US warfighting strategy in the Far East. This strategy, as will be discussed, is essentially a maritime one and Japan provides an ideal assault platform for US naval and air deployments. Regardless of what Japan decides to spend on maritime defence assets, it should always be remembered that such assets will always be considered merely a bonus by the US. Neither superpower can afford to rely on the possibility of substantial help from any ally.

The PRC continues to maintain a strong, conventional submarine based sea-denial capability in its northern and central coastal areas and has made steady progress in its SSBN development programme. However, a more balanced development of blue water capabilities is progressing. This suggests that China is eager to increase its maritime capability relative to its neighbours, especially in the South China Sea, compete with the Soviet detachment in the same region and exert a degree of maritime 'leverage' over Vietnam. Vietnam has no maritime expansion base with which to augment its formidable land forces. However, the granting of basing rights at Cam Ranh Bay has assisted the Soviet Navy and has enhanced its flexibility to a limited though measurable extent.

The ASEAN states are extremely wary of Vietnam and are also very suspicious of the PRC and its long term regional ambitions. Yet they persist in maintaining adherence to the sacrosanct principles of ZOPFAN and strongly resist pressure to form an overt military alliance capable of holding land and ocean against a clearly recognised and increasing 'Sovietnamese' force projection capability.

This paper endeavours to develop a unified framework in which to discuss current and future naval developments in the Asia-Pacific region. Such a framework includes elements of the superpower rivalry and the potential naval contribution which can be made by the anti-Soviet nations of the region to the maintenance of a clear US maritime superiority.

It has been said that war usually results when nations disagree concerning their relative strengths.[1] Fortunately, even the Soviets implicitly recognise the clear US advantages in this theatre and a substantial level of stability is likely to persist.[2] This stability is, in turn, fundamental to the security of all the nations in the region. By helping to perpetuate this disparity

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in maritime strength favouring the US, the anti-Soviet nations of the region are acting to minimise the chance of superpower conflict and are therefore directly, promoting global stability.

SECTION A: THE SUPERPOWERS

Warfighting Objective in the Region

Superpower naval developments in the region are best understood by considering their likely warfighting plans. Soviet Naval warfighting plans and objectives within the Asia-Pacific and Indian Ocean regions must necessarily be quite limited. The main reasons for this are the constraints placed on SOVPACFLT by unfavourable geography, lack of balance in force structure and a clear US naval superiority throughout the region (see Table 1). Nevertheless, the implications of SOVPACFLT and its warfighting plans must be seen in the wider context of how they contribute to the salient strategic objectives of the USSR first on a global basis and then in terms of the East-Asian theatre generally.

The two fundamental Soviet strategic objectives in the East Asian theatre are

TABLE 1

RELATIVE SUPERPOWER FLEET STRENGTHS IN THE PACIFIC 1986

Type/Force	*USPACOM(a)*	*SOVPACFLT*
Major Surface Combatants:		
Attack Carriers	7	—
Battleship/Battlecruisers	2	1
Cruisers	17	16
Destroyer/Frigates	76	35(b)
Submarines:		
Strategic	5(c)	32
Attack (Nuc)	43	30
(Conv)		15(c)

This table summarises only 'teeth' platforms of comparable operational capability. Amphibious, minewarfare, replenishment and other vessel types are not considered since their contribution is unlikely to be decisive in the first days of war.

Note: (a) During the late 1960s and throughout the 1970s USN withdrew many of its older combat vessels from active service. Other than the older aircraft carriers of the Midway class the US Navy currently has few vessels with hulls laid down before the early 1960s. The US maintains a very modern Navy as opposed to the Soviets (see below).

(b) Though 80 destroyers and frigates are deployed in SOVPACFLT on paper, 35 of these are obsolete gun frigates of the Riga, Grisha and Petya classes. 10 are obsolete gun destroyers of the Skory, Kotlin and Kilden class.

(c) About 90 Attack/Patrol submarines are deployed with SOVPACFLT. Of the 60 conventional submarines in this number, 45 are of dubious operational value and are predominantly old hulls of the Z, W and F classes. While their effectiveness could be considerable in the SSBN bastions their value as interdiction units in the high seas is dubious.

Sources: This table was compiled using the following sources in conjunction with updates on known changes to both fleets in the period 1984–86.

(1) A Baker and J. Cohat, Combat Fleets of the World 1984/85 US Naval Institute Press.
(2) M. Collins and T. Glakas, US-Soviet Military Balance: Statistical Trends, 1970–1982. Congressional Research Service, The Library of Congress, Washington, D.C., 1983.
(3) The Almanac of Sea Power 1984, Navy League of the United States.
(4) The Military Balance 1985–86.
(5) B. Schemmer, The Pacific Naval Balance, Armed Forces Journal International, April 1984.

suggested to be:

- Maintaining the integrity of both land based and sea based strategic missile forces.
- Maintaining superiority over China in the Air-Land battle.

Other objectives such as interdiction of shipping and maximising attrition of allied naval/air forces are likely to be seen as relatively insignificant during the first days of escalation and war in this theatre. For reasons which will be outlined, it is assumed that the Soviets will consider the Asia-Pacific region as a secondary maritime theatre when compared to the European-Atlantic theatre and they will be content to wage a defensive campaign to ensure the achievement of their fundamental theatre objectives in the east.

The presumed Soviet defensive strategy in the Asia-Pacific Region stands in stark contrast to the marked offensive strategy of the United States Pacific Command.

US Warfighting Plans in the Region

The current US CNO, Admiral J.D. Watkins, has expressed his 'Roll-Back' strategy of aggressive operations prosecuted close to the Soviet Union as follows:

> The need for forward movement is obvious. This is where the Soviet fleet will be, and this is where we must be prepared to fight. Aggressive forward movement of anti-submarine warfare forces, both submarines and maritime patrol aircraft, will force Soviet submarines to retreat into defensive bastions to protect their ballistic missile submarines. This both denies the Soviets the option of a massive, early attempt to interdict our sea lines of communication and counters such operations against them that the Soviets undertake.[3]

Watkins believes that the Soviets will prefer to concentrate on a single theatre and that the USN must have the ability to deny them this option. He expects

> . . . the bulk of Soviet naval forces to deploy in areas near the Soviet Union, with only a small fraction deployed forward.[4]

Focusing on the Western Pacific he comments that, while the main Soviet thrust will probably be in Europe and the Atlantic

> . . . Forward deployment must be global as well as early. Deployments to the Western Pacific directly enhance deterrence of an attack on Europe by providing a clear indication that, should war come, the Soviets will not be able to ignore any region of the globe.[5]

The essential goal of the US Pacific Command in the NW Pacific is to destroy as many of the 31 Soviet SSBN stationed in Pacific waters as possible and secure the US West coast from missile attack. The Far East Soviet SSBN are based in Vladivostok, and Petropovlovsk on the eastern side of the desolate Kamchatka Peninsula. For reasons that are not entirely clear only 3–6 of these vessels are on task in deployments during peacetime.[6] In an 'activated' or alert situation during time of tension most of these vessels would be readied for sea and would have to deploy from Vladivostok into the seas of Okhotsk and Japan. The few SSBN able to be maintained at Petropavlosk would have a good chance of escaping into the high seas of the Pacific but those based in Vladivostok would not.[7] These extremely valuable strategic platforms would have to transit choke points through the Japanese straits and the Kurile Island chain. Within hours these straits could be fouled by specialised ASW mines of the US MK 56,57 and 60 variety of which large stockpiles exist at HQ 7th Fleet, Yokosuka, Japan.[8] Sophisticated US/Japanese active and passive surveillance resources coupled with formidable aviation ASW units makes the risk of transit for a Soviet SSBN prohibitive in an activated situation.

US forces appear determined to mount a highly concentrated anti-SSBN effort in the seas of Japan and Okhotsk at the earliest opportunity. US planners have little fear of SOVPACFLT surface vessels making sorties from the so-called SSBN bastions since, without cover from the Soviet Naval Airforce (SNA) the Soviet surface combatants are simply not survivable. The maximum covering range of the SNA is about 1,500 miles.[9] Studies in the late 1970s reveal the following:

> The dominant characteristics of many Soviet surface combatant ships — high speed; great striking power; and relatively limited cruising ranges and reload and resupply capabilities — all suggest that their employment in a long, drawn out conventional war was not foreseen as a major mission when they were built.[10]

However, with the building of the new, improved classes of cruisers and destroyers, and a large attack carrier, things are changing. Yet the Soviets still have many years to go before they can match the USPACFLT on the surface and in ASW.

A priority for US carrier forces dedicated to neutralising Soviet SSBN will be neutralising the highly capable SNA in order to ensure that a concentrated array of US air, sea and undersea ASW forces can infiltrate the SSBN bastions. In his recent strategy statement Watkins claims that:

> . . . The overriding goal is to counter the Soviets' missile launching platforms, to shoot

the archer before he releases his arrows. Not only is it easier to destroy bombers than missiles, but the bomber destroyed today cannot return with more missiles tomorrow. Our strategy envisions making extensive use of jamming, deception and decoys to counter the enemy's targeting capability. . . . No single approach will be sufficient; countering the Soviet air threat through offensive anti-air warfare demands a layered approach.[11]

In 1978 Admiral T. Hayward, CNO at that time, testified to the US Committee on Armed Forces that:

. . . Our plan would be as a first line of defence to strike the airbases from which the Backfire bombers fly and the submarine bases from which the nuclear powered submarines operate.[12]

In 1985 Hayward's successor, Watkins, testified before the same committee and expressed the same desire to apply immediate pressure against Soviet naval and air bases:

. . . in the North-West Pacific our feeling is that at the very front end of conflict, if we are swift enough on our feet, we would move rapidly into an attack on Alekseyevka (a major Backfire base).[13]

Watkin's concern with the SNA threat to US ASW missions in the SSBN bastions is understandable. A large number of US nuclear attack SSN are doubtlessly earmarked for operations within carefully delineated pockets of the bastions. Certain CVBG, which are the only forces deemed capable of surviving in these 'high threat' zones, will be scouring other areas.[14] Japan based USAF and JAF ASW units will also have areas of responsibility to concentrate on. With this concentration of highly capable ASW technology, allied forces would have a reasonable chance of systematically eradicating the relatively noisy Soviet SSBN — assuming a general nuclear war had not broken out by this stage![15] However, the 'Joker in the SOVPACFLT pack' as it were is the SNA which could win the crucial air superiority contest and hamstring the allied ASW effort.

The major threat faced by US surface and air units entering the bastions is that posed by SOVPACFLT bombers of the TU-22M Backfire and TU-16 Badger variety. About twenty Backfires are under SOVPACFLT Opcon as well as over 100 Badgers. While the Badger is a formidable unit in its own right, the Backfire is far more mission capable, particularly in ACW. It has a larger combat radius (1,500 nm) at higher

TABLE 2

USN PEACETIME-WARTIME DEPLOYMENT

	Peacetime Maritime Strategy	*Wartime Maritime Strategy*
	Sixth Fleet	
CVBG	1.3	4
BBSAG	.3	1
URG	1	2
	*Second Fleet**	
CVBG	6.7	4
BBSAG	1.7	1
URG	4	3
	*Seventh Fleet***	
CVBG	2	5
BBSAG	.5	2
URG	1	4
	*Third Fleet**	
CVBG	5	2
BBSAG	1.5	—
URG	4	1

*Includes forces in overhaul
**Includes Indian Ocean forces
Note: CVBG — CARRIER Battlegroup
BBSAG — Battleship Surface Action Group
URG — Underway Replenishment Group

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speed (1,299<560 cruise) at lower altitude, with a higher weapons payload (25,000 lb). It carries the new 10 metre long AS-4 Kitchen missile. These extremely powerful, nuclear anti-ship weapons are believed to have a 150–250 mile range travelling at a speed of mach 3.0–3.5. They weigh 14,000 lbs and it is suspected that the Backfire flies with two of them. In short, the Backfire system is an ideal ACW system which is ably supported by numerous Badgers B/C and G carrying AS-4, As-5 Kelt and As-6 Kingfish weapons.[16]

Despite the extreme risks of operating within the SSBN sanctuaries the USN has given every tangible indication that it is serious about this daring concept of operations. Table 2 indicates that half the entire USN will initially be concentrated within the Pacific Command during wartime. The Seventh Fleet will be 'surged' to 5 CVBG, 2 BBSAG and 4 URG in war time while the Third Fleet will have a strength of 2 CVBG. Coupled with the large numbers of USAF aircraft deployed within the US 5th and 13th Airforce based in Japan and the Philippines respectively, the USPACOM has much firepower to draw on now and in the future. The Pacific Command, which currently musters 220 vessels can expect another 60 or so deliveries by 1989 when the 600-ship navy objective is realised. Moreover, while only 20 per cent of USPACOM aircraft were considered advanced in 1980 this figure will have risen to 70 per cent by mid-1986.[17]

The Soviet Naval Strategy

The Soviets are obviously far less vocal concerning their Far East naval strategy than are the Americans. However, while Soviet strategy in the Baltic and North Atlantic is open to great uncertainty, predictions concerning Soviet naval operations in the Pacific can be made with more confidence.

A long series of US CinCPacs have consistently exaggerated the effectiveness of SOVPACFLT since the mid-1970s.[18] The SOVPACFLT is often quoted as the largest of the four Soviet navies before US Appropriations Committees but the word 'largest' is deceptive. Certainly, the SOVPACFLT tonnage is perhaps twice that of the combined tonnage of the US 7th and 3rd Fleets in the Pacific. The number of ships in SOVPACFLT totals 826 as compared to the 300 or so under CinCPac Opcon. Yet the discrepancy between rival fleets in terms of firepower, target acquisition capability and EW is very considerable.

Table 1 gives a realistic overview of the relative US/USSR naval strength in the Pacific. As can be deduced from the accompanying notes the Soviets 'don't throw anything away'. SOVPACFLT has received highly visible, highly capable vessels in recent years but these are only the tip of the iceberg based on old classes of conventional submarines and large numbers of obsolete gun destroyers and frigates. SOVPACFLT's numbers are also swelled by huge numbers of minor war vessels used for amphibious, mine warfare and short range replenishment operations.

The fact is that SOVPACFLT is generally outclassed and outgunned by a US Pacific Fleet which is not only more numerous in most classes of combatant but also superior in most aspects of maritime tactical operations. Clear US superiority exists in the areas of ASW, AA, AS and EW. Even the much touted concept of heavily armed Soviet surface ships is deceptive when compared to US vessels which have much larger reload and magazine capacity than Soviet vessels.[19]

These factors have not gone unnoticed by Soviet naval planners. They appear to have no intention of taking on US naval units outside the 1,500 nm radius of effective SNA air coverage. While the far superior and more modern Northern Fleet can afford to be more ambitious, SOVPACFLT commanders cannot and this is reflected in their limited exercise areas which basically cover the seas of Japan and Okhotsk (see Chart 1). Consequently it is unlikely that SOVPACFLT operations will be able to seriously affect shipping in the Pacific or Indian Oceans while confronted with current proposed US wartime naval deployments in these oceans. In fact, in 1979 the authoritative 'Securing the Seas Study' compiled by the Atlantic Council Working Group under Paul Nitze estimated that only one dozen Soviet submarines would be available to interdict shipping in the Indian and Pacific Oceans. Half of these would fall into the obsolescent classes. The remainder of the SOVPACFLT submarines would be committed primarily to NW Pacific targets such as CVBG and BBSAG attempting to pulverise SNA support for SOVPACFLT and quickly carry out their crucial ASW missions.[20] Clearly, SOVPACFLT threat to allied shipping in the Indian and Pacific is quite exaggerated and interdiction of such shipping would rate low on the SOVPACFLT priority list in the early stages of conflict. Unlike the Northern Fleet, SOVPACFLT does not have the advantages in terms of either force structure or geography which are prerequisites to a successful interdiction campaign.

Thus, with the exception of a few submarines, SOVPACFLT will probably be confined to the seas of Japan and Okhotsk and be tasked with neutralising a massive US ASW undertaking. If proper coordination is maintained between undersea, surface and air units of SOVPACFLT then heavy loss at least will be inflicted upon US

forces endeavouring to sanitize the SSBN bastions. Indeed, a defensive victory could be attained by Soviet forces if SNA weapons and procedures prove reasonably effective against US carrier groups. There seems little doubt, given the nature of the opposing superpower naval forces, that the contest in the NW Pacific will be one of localised attrition in and around the Seas of Japan and Okhotsk.

Nothing is very surprising about this conclusion. But, the Soviets will have succeeded in concentrating the most modern half of the US Navy in a theatre which they, the Soviets, seem to consider to be of secondary importance. Table 2 indicates that only 4 CVBG will be deployed with the Sixth Fleet in the North Atlantic. If, as Watkins believes, the Soviets desire to concentrate on the European theatre why will the Sixth Fleet be so lightly clad for its alleged task of dominating the Norwegian sea and securing NATO's northern flank? How will the Allies wage a third 'Battle of the Atlantic at the same time against a very large, capable and modern Soviet Northern Fleet submarine force? Secretary Lehman has officially buried the possibility of 'swinging' units from the Pacific to the Atlantic on several occasions. Of course, this may be for the purely political reason of ensuring the maintenance of a 600 ship Navy which provides for standing theatre forces.[21]

It is suggested here that the US Navy 'Swing' strategy of the late sixties and early seventies has not been abandoned at all and this may have considerable implications on US deployments in the Pacific and ultimately on the survivability of SOVPACFLT. Certainly Watkins has not buried the swing strategy as indicated by his projected Repositioning Steaming Times estimates (see Table 3).

If the US is serious about reinforcing Europe against the Soviets perhaps the two CVBG of CINCPAC's Third Fleet may need to be deployed to the Atlantic via the Panama Canal (16–20 days). Seventh Fleet elements would then have to take responsibility for Third Fleet's area of operations in the Aleutians and Bering Sea and off Alaska.[22] This would, of course, spread the US Seventh Fleet in wartime much more thinly than would otherwise be the case. Also, if CinCPac considered a sizeable Indian Ocean presence necessary then this would further reduce Seventh Fleet concentrations around Japan and exacerbate the inherent difficulties of prosecuting a concentrated ASW offensive within the SSBN sanctuaries. Thus, if the global situation necessitates a 'swing' of CinCPacs' forces to the Indian and Atlantic Oceans then the USN may have to look at settling on an action based on simply containing the SOVPACFLT and waging a limted ASW war in the bastions. Certainly, it is the authors' estimate that the Seventh Fleet is capable of satisfying this bottom line requirement even if its areas of responsibility have been broadened by the need for Pacific Fleet units in the Atlantic.

Therefore, even if USPACFLT strength is considerably reduced by the USN's global commitments and a 'swing' is needed, it remains our judgement that SOVPACFLT remains highly constrained in its ability to challenge the USN in either the Indian Ocean or the high seas of the Pacific. It is also suggested that, while Soviet naval commanders in the Far East are indeed improving their high seas capability, they will lack the confidence to break out of the bastions at the outset of war. This could only change after major attrition of US CVBG and the best way to achieve this is for SOVPACFLT to fight a defensive war in

TABLE 3
USN COMBATANT REPOSITIONING TIMES

From	*To*	*Steaming Days*
US East Coast	Northern Atlantic	7
US East Coast	Mediterranean	10
US East Coast	Indian Ocean	24[1]
US West Coast	Northern Atlantic	31[2]
US West Coast	Western Pacific	9
US West Coast	Indian Ocean	24
Mediterranean	Northern Atlantic	6
Mediterranean	Indian Ocean	21[3]
Indian Ocean	Northern Atlantic	24
Western Pacific	Indian Ocean	14

[1]Subtract 6 days by using Suez Canal [2]Subtract 13 days by using Panama Canal
[3]Subtract 15 days by using Suez Canal
Note: Based on closure times at 20-knot speed of advance.

the bastions under maximum effective cover of the Far-East SNA. Certainly, the pattern of Soviet exercises in the area supports this assertion.

In summary, Soviet naval developments in the Far East are centred on contributing to the defence of land and sea based strategic systems and neutralising any sea based threat to the favourable Soviet Air-Land array against the PRC. In particular, SOVPACFLT's primary task, in conjunction with the SNA, Far East is to blunt a concentrated Allied ASW effort within the Seas of Okhotsk and Japan. SOVPACFLT remains a force which cannot, in the foreseeable future, 'carry the fight to the enemy' and remains a basically unbalanced force. Nevertheless it can do its job in terms of fighting a successful local defensive action against the USN in the Far East. This may be all that the Soviet leadership may require of it.

SECTION B: THE 'SMALLER PLAYERS IN THE NW PACIFIC"

The Smaller Players: PRC and Japan

If the main US objective in the Far East is to maximise damage to the Eastern USSR strategic missile forces then perhaps the smaller naval forces of the region can contribute indirectly to this effort. These 'smaller players' include PRC, Japan, and the countries of ASEAN.

It has already been suggested that during a global war some US PACFLT strength may have to be 'swung' to meet USN global responsibilities. If, as discussed, the 2 CVBG of the Pacific Third Fleet were repositioned to support Sixth Fleet operations in a new Battle of the Atlantic, then a wartime Seventh Fleet would have responsibility for maintaining naval dominance in the waters around Japan, Korea, the Philippines, the Aleutians, Bering Sea, Alaska, the South-East Asian Straits, Thailand, the South China Sea as well as the mid Pacific and Indian Ocean. Should the smaller players be able to take some of the area control burden from the Seventh Fleet in any of those areas, then the chances of the US mustering a concentrated anti-SSBN force around Japan would be enhanced. Let us consider how the navies of the smaller players are developing and assess their potential contribution to the 'allied' objective of containing the Soviets. It should be emphasised from the outset that political constraints necessitating the PRC to side with the US are assumed in the assessment of the anti-Soviet *entente*.

The PRC

China's priorities in economic construction has not deterred its quickened pace in the modernisation of the navy. The ability to develop an infant SSN and other areas like improved ASW capabilities and certain degrees of modernisation in surface combat ships suggests that China's objectives are not merely to maintain a coastal defence navy. First, SSN and SLBM developments complete China's strategic triad and increase its deterrence capabilities. China's ability to maintain a strong, conventional submarine force (albeit not state-of-the-art) reinforces its confidence in protecting its northern and central coasts against possible Soviet attacks. Given SOVPACFLT's constraints in the North-West Pacific and adequate Chinese ASW capabilities in that region, it is unlikely that any Soviet attempt to launch amphibious attacks against, say, the Liaodong Peninsula, would succeed.[23] In addition, the acquisition of state-of-the-art helicopter technology (Super Puma) and application of updated avionic modifications to the J-8 contribute to a very significant improvement in Chinese counter-amphibious capability by providing enhanced air cover, and particularly in the case of helicopters a very flexible means of coastal maritime interdiction.[24] In that respect, a modernised Chinese Fleet limits the Soviet attacks to an air-land battle without the Chinese having to cover their flank. Even the relatively dated Whisky and Romeo classes of submarines will be most effective against Soviet surface combat ships should they venture to approach the Liaodong Peninsula. Furthermore, the part to be played by the US in the Sino-Soviet conflict will always have to be considered carefully by the Soviets. Chinese sea denial capabilities are especially relevant in the South China Sea where the Chinese are capable of projecting their force without much fear of severe competition.

Indeed, China's South Sea Fleet with its headquarters at Zhanjiang and submarine base at Yulin (two flotillas) is capable of making its presence felt in territorial disputes with its neighbours in the South China Sea should it see it politically expedient to do so.[25] (See Chart 1). Furthermore it is also able to maximise its sea denial capabilities *vis-a-vis* the SRV in effecting a naval blockade on the SRV coast with the combined efforts of Rapid Aerial Minelays (RAMs) and Covert Submarine Minelays (CSMs). Given the limited capabilities of the Soviet detachment at Cam Ranh Bay, which is notably weak in ASW capabilities, the Chinese will not find the Soviets to be a major threat in exercising their sea denial capabilities. Should the SOVPACFLT decide to reinforce the Cam Ranh detachment, the situation might change. Nevertheless, any change in the maritime balance would cause certain actions to be taken

by the US Seventh Fleet in favour of the enemies of the Soviets.

Japan

The US-Japan Security Treaty provides the justification for establishing Japan as an 'unsinkable aircraft carrier' for the US in its efforts to maintain a dominant role in the Asian-Pacific region. By virtue of its geostrategic position *vis-a-vis* the Soviet Far East, Japan is essential in minimising US response time and maximising US force projection against the SOVPACFLT. By the same token, the USSR is extremely sensitive to any Japanese arms build up or increased US-Japan military ties.

For the US, it is essential that Japan remains a close ally under the Security Treaty and gives US forces a free hand in operational issues such as the closing of the Straits of Tsushima, Tsugaru and Soya and favours US requests to make port calls (with special reference to nuclear-powered and nuclear-armed ships).[26] As a valued ally, Japan reinforces US sea-air dominance. The JSDF contributes substantially to surveillance and ASW capabilities. The Japanese also have a respectable air force including 6 squadrons of F15 and 7 squadrons of F5J aircraft, all of which form part of the theatre air dominance equation as the US strive to maintain air superiority over the East Asian Soviet air formations.[26]

Recent reports of joint exercises point to a much more positive Japanese role in the defence of Northeast Asia.[28] In addition to ANNUALEX, which is a joint US-Japan annual exercise in Japanese waters testing Japanese capabilities, the Japanese also play a supporting role in larger American exercises. For instance, elements of the Japanese Navy played a supporting role in Fleetex 85 which tested US ability in both the Pacific and the Indian Ocean, including its mission to protect the Japanese sea lines of communication. In addition, Japanese sensors and electronic systems contributed to

CHART 1 DISPUTED SEA AREAS — SOUTHEAST ASIA

supporting 20 US ships in a major exercise in December 1984 which tested Soviet defences and Standard Operating Procedures (SOPs) in an activated situation.[29]

The Japanese defence budget for fiscal year 1986 is US$16.552 billion, which is 6.58 per cent more than 1985 budget and is 0.99 per cent of the GNP. Although the ceiling of one per cent of GNP does put constraints on intended targets that the Defence Agency wishes to achieve, Japan still expects to improve on sustainability and logistics as well as on coordination with US forces.[30] Even within the specified budget, Japan continues to build up its sea-air capabilities.

Japanese ASW and Mine Countermeasures (MCM) capabilities have been expanded with the purchase of an additional 103 Lockheed/ Kawasaki P-3C aircraft and Sikorsky MH-53 Minesweeper helicopters. Surveillance and EW capabilities constitute another significant Japanese contribution, with the Grumman E-2C airborne early-warning aircraft playing an important role. Therefore Japanese defence resources can contribute a valuable bonus to the US units deployed in this critical area of the region.

SECTION C: SOUTH EAST ASIAN DEVELOPMENTS

Southeast Asia and International Rivalries

Southeast Asia has witnessed intense rivalries in the last two decades. The American experience in Vietnam and growing Soviet strategic interest in the Asian-Pacific region are classic examples of the role played by central balance powers in world politics. The People's Republic of China (PRC) also qualifies as a central balance power in the role it plays over the Kampuchean question. For conspicuous geopolitical reasons, China wishes to seek a satisfactory solution to the Kampuchean question (which demands unconditional withdrawal of Vietnamese troops from Kampuchea) in order to reduce the threat posed by the USSR and the Socialist Republic of Vietnam (SRV) to China and Southeast Asian nations. Japan, the economic giant which has a fairly large Southeast Asian market, also wishes to ensure that its long sea lines of communication traversing Southeast Asia are secure.

Southeast Asian nations' response to superpower influence in the Pacific is in turn complicated and intriguing. In the first place, it is responsible for the polarisation of pro-Soviet Vietnam and its associates (Laos and Heng Samrin's Kampuchean regime) are clearly without friends in the region (Indonesia's position is sometimes ambiguous). Despite Vietnamese isolation, the Soviet-Vietnamese *entente* has obviously been considered destabilising to the Pacific strategic balance not only by the US, but also by China and Japan. Second, ASEAN (Association of Southeast Asian Nations) member states, as the representative voice of the Third World in the Pacific, do not wish to be too closely intertwined with superpower politics although they welcome greater economic cooperation and expect less protectionism from America. Paradoxically, this is a strong ASEAN stand despite the fact that some of them had entered into alliances with the US at one time or another in the last four decades.[31]

In this connection Indonesia, as the 'leader' of ASEAN, prides itself in being a truly non-aligned nation of Bandung vintage which upholds the principle that ZOPFAN (Zone of Peace, Freedom and Neutrality) stands for.[32] Despite political differences amongst its member states, it is valid to claim that ASEAN is suspicious of superpowers because of possible political instigations from those quarters, and it considers such institutions to be the result of internal and intra-regional conflicts.[33] On the other hand, independent ASEAN initiatives have not brought about a genuine Vietnamese promise to withdraw troops from Kampuchea. Somehow, the principle of ZOPFAN and the involvements of superpowers do create contradictions, so that ASEAN has found it difficult to live up to the principles that it has set for itself.

During the Kuala Lumpur talks of July 1985, ASEAN Foreign Ministers have not made much headway in breaking the Kampuchean deadlock. However, it has at least confirmed the usefulness of 'proximity talks' and apparently drawn greater American support for ASEAN's stand over the Kampuchean question. Deadlock is an appropriate term to describe the current situation concerning negotiations over Kampuchea. The latest peace initiative presented by the Coalition Government of Democratic Kampuchea (CGDK) in March 1986 also seems doomed to failure as Hanoi closed off talks in late April. ASEAN parties have backed this 8 point plan for a phased Vietnamese withdrawal from Kampuchea and the institution of a 4-party regime, including Hang Samrin, but Hanoi has thus far rejected it.[35] Increased dissension on the Kampuchean question between the ASEAN partners of Indonesia and Thailand does not help this situation, and political solution in Kampuchea seems remote.[36]

The Indochinese situation illustrates not only difficulties in crisis-management but also differing views upheld by nations of what constitutes threat perceptions and national

interests. For instance, China perceives 'Vietnamese expansionism' as menacing to security in the region. Others, like Indonesia (and even some Australian views), do not perceive Vietnam in the same light. They would indeed see the virtue of having a buffer zone in Indochina to be contributing to stability in the region. ASEAN (especially Indonesia and Malaysia in that order) is suspicious of China's intentions in Southeast Asia because of the history of Chinese-instigated Communist insurgencies, the economic and political role of ethnic Chinese in Southeast Asia and China's reluctance to sever party-to-party relations with Communist parties in Southeast Asia.

As regards US-USSR rivalry in the Asia-Pacific region, the spirit of *detente* in the 1970s gave way to fear of a realistic threat in the Pacific. American withdrawal from Vietnam and the collapse of South Vietnam in April 1975 began to swing the strategic balance. The SRV's invasion of Kampuchea in 1978 further created international tension. The USSR as a central balance power has since established its strategic claims in the Pacific despite the fact that the Soviet-Vietnamese alliance of 1978 is very much resisted by Vietnam's hostile and concerned neighbour.

In the midst of international rivalries, the ASEAN states should actively seek a solution to the Kampuchean question not merely through diplomatic means. ASEAN should actively strengthen its deterrence capabilities as a direct response to 'Vietnamese expansionism'. In addition, the ways and means of preventing the 'collapse of the dominoes' should not be confined to the buildup of the ground forces.[37] Indeed, increased ASEAN naval capabilities can contribute positively to maintaining the strategic balance in Southeast Asia.

ASEAN Naval Developments

Set against a background of diplomatic conflict and deadlock, ASEAN nations are moving towards building much more effective military forces. In particular, most ASEAN navies and air forces have enjoyed strong growth over the last decade.

The small ASEAN navies can have an inordinate effect upon shipping if they use the environment as a prolific force multiplier against more powerful forces. For example, Indonesia flanks or straddles practically every eastern exit out of the Indian Ocean. One such exit is the Malacca Strait, the control of which is shared between Indonesia and Malaysia. This 500-mile long strait, which is funnel-shaped with the navigable channel reduced to barely two miles wide at the southern end, is used by an average of 1,000 merchant ships weekly. It can be completely blocked with relative ease at the southern end, where depths range from 15 to 40 fathoms.[38] Ships displacing more than 225,000 tonnes cannot transit this strait and must be diverted to the Sunda and Lombok Straits, each of which is straddled by Indonesia.[39] If these straits were fouled, the passage from the Persian Gulf to Japan southwards around Australia would be 14,000 miles. This compares with 6,900 miles via the Malacca Strait and 8,000 miles via the Lombok Strait.[40] The economic impact alone of such a diversion would involve a 20–30% increase in the price per barrel of oil

TABLE 4

ASEAN MARITIME STRIKE — ORDER OF BATTLE (April 1986)

Platform/Nation	Malaysia	Indonesia	Singapore	Thailand	Philippines
Frigate	4	8	—	4	5
Submarine	—	3	—	—	—
FMPB	12	4	6	9	—
Air Force	39	42	113	52	56
Patrol Boat-G	83	12	24	100	90
MW	4	4	2	5	—
Amphibious	21	19	12	45	114

Note: (i) This table only includes platforms which are considered by the authors to be operationally adequate. Several navies in the region maintain old units of dubious value (e.g. two ex-Soviet *Riga* class destroyers on Indonesian naval inventory are not included in the list).

(ii) Air force platforms capable of maritime strike and interception operations are included by virtue of their extraordinary utility in supporting naval operations in the restricted waters of the region. Only fixed wing units are included in totals.

Source: Janes Fighting Ships 1984–85

imported to Japan, which is of grave importance given that Japan imports about US$27 billion of crude petroleum alone from the Middle East per year.[41] The subsequent increase in production costs and manufacturing delays in Japan would, of course, have an adverse effect on overall Western economic stability.

The relative shallowness and confinement of Southeast Asian waters constrain the full employment of large surface combatants and submarines. Most ASEAN navies have shown and will continue to show a keen and justified interest in FMPB operations. The advantages in deploying these craft, which are equipped with light and reliable Precision Guided Missiles (PGM), are considerable. Most ASEAN states widely deploy the French-built Exocet Anti-ship (AS) missile (Malaysia, Thailand, Indonesia) while Thailand and Singapore also have Harpoon and Gabriel respectively.[42] All FMPBs are up-to-date and possess potent strike power at a good stand-off range. The navies deploying FMPB (see Table 4) have found them flexible, highly manoeuvrable and fast. FMPB also offer a small target to interdiction forces. The indented and sheltered coastlines of the region provide abundant anchorages for these small craft which displace between 200 and 500 tonnes. FMPB can be easily camouflaged and concentrated in such anchorages for the brief but intense naval encounters which will probably characterise most naval engagements in the region.[43]

ASEAN naval planners are becoming increasingly aware of the critical fact that land-based air power can be used to exercise a decisive effect in the confined waters of the region.[44] Maritime interdiction by surface elements can be substantially reinforced by competent air strike elements which provide a capacity for offence and defence in depth. Except against US carrier forces, ASEAN states can be expected, at least on paper, to have an air superiority in their areas of maritime interest and may be effectively regarded as an 'unsinkable' aircraft carrier in terms of their strategic positions and land-based air units. For example, Singapore has an extremely small navy but it has the best ASEAN air force which comprises some 30 F5-E interceptors, 70 A4 fighter-bombers and 33 old Hawker-Hunter F76/F78 interceptors.[45] These aircraft are well piloted and well maintained. As regards Malaysia, it has a significantly larger navy but a less capable strike force of only 19 F5 E/F interceptors and 20 A4 fighter-bombers.[46] Such forces in any case given ASEAN an air superiority, making life very difficult even for the powerful Soviet Surface Action Groups, especially when air superiority is well coordinated with FMPB attacks.

It is of interest to note that most ASEAN navies in their own modest but consistent ways are aiming at acquiring balanced naval capabilities involving force projection elements. This is in contrast to the maintenance of essentially coastguard forces in the period up to the early 1970s. Since then equipment for conventional

TABLE 5

ISLAND CLAIMS IN THE SOUTH CHINA SEA (April 1986)

Common Name	Claims	Occupied by
'Spratly Group'	PRC/SRV/ROC/MAL/PHIL	ROC/SRV/PHIL
Amboyna Cay	PRC/SRV/ROC/MAL/PHIL	SRV
Commodore Reef	PRC/SRV/ROC/MAL/PHIL	PHIL
Flat Island	PRC/SRV/ROC/PHIL	PHIL
Itu Aba	PRC/SRV/ROC/PHIL	ROC
Lankiam Cay	PRC/SRV/ROC/PHIL	PHIL
Loaita	PRC/SRV/ROC/PHIL	PHIL
Namyit	PRC/SRV/ROC/PHIL	SRV
Nanshan	PRC/SRV/ROC/PHIL	PHIL
Northoist Cay	PRC/SRV/ROC/PHIL	PHIL
Pearson Reef	PRC/SRV/ROC/PHIL	SRV
Sand Cay	PRC/SRV/ROC/PHIL	SRV
SW Cowe	PRC/SRV/ROC/PHIL	SRV
Southeast Cay	PRC/SRV/ROC/PHIL	SRV
Spratly Island	PRC/SRV/ROC	SRV
West York Island	PRC/SRV/ROC/PHIL	PHIL
Thitu	PRC/SRV/ROC/PHIL	PHIL
'Parcel Groups'	PRC/SRV/ROC	PRC
Pratas Reef	PRC/ROC	ROC

external naval operations has received greater priority. This is reflected in the increasing number of modern frigates and corvettes being acquired by ASEAN navies (see Table 4).

A definite trend towards closer military ties within the ASEAN community is evident. Singapore has been the most vocal in calling for combined military exercises to strengthen the collective defence of non-communist Southeast Asia against the SRV. Tacit approval to this call has been given by most of the ASEAN partners as indicated by the growing network of bilateral defence arrangements involving a large variety of land, sea and air exercises.[47] In general, however, members have been reluctant to give formal consent to the formation of an overt military alliance. Apparently such a move is perceived to be conducive to destabilising the political situation and encouraging further Hanoi-Moscow force buildup. But such cautious attitudes may change should communist penetration and militarisation in the region reach higher levels. To get the most out of the ASEAN force, multilateral operations must regularly be conducted so that command/control/communications problems, so often the curse of loose alliances, may be overcome in peacetime. ASEAN states must face the fact that, under increasing communist pressure, they may have no recourse but to formalise military ties and take an even more systematic approach to equipment and doctrinal standardisation, joint bulk-buying of equipment and general force development.

Problems on the Horizon:
The Disputed Waters of the South China Sea

Overlapping sovereignty claims are of particular concern in the South China Sea (see Chart 1). The PRC claims ownership of almost 200 islands and islets in this sea alone.[48] This is all very well, until it is realised that a portion of these same islands is claimed by Taiwan (ROC), SRV, and several ASEAN states (see Table 5). The PRC, as a signal of resolve in backing its sovereignty claims and indicating determination to the SRV and USSR, has built up its naval forces in the area and has been engaged in sustained exercises in the South China Sea, the Philippine Sea as well as the Gulf of Thailand. Consistent improvements have been observed in alongside refuelling at sea and logistics transfer in addition to ASW, AS, rotary wing and FMPB operations.[49] These advances in PRC naval capability for force projection in the South China Sea are heavily supported by landbased air and missile formations in the adjacent Hainan Military District.[50] Consequently, the PRC has tangibly shown its resolve to enforce its claims in the South China Sea against all comers and, in particular, the SRV and its ally.

The SRV Navy to this point has not greatly benefitted from the Soviet connection. Its navy is a hotch-potch of ex-US and Soviet vessels which effectively constitutes a coastal force of very limited operational value.[51] However, a naval development seen as very disturbing by ASEAN states is the growing involvement of the USSR in supporting amphibious operations. In April 1984, a few hitherto landbound units of the People's Army of Vietnam (PAVN) joined a battalion of Soviet naval infantry in a large scale amphibious exercise in SRV waters. The nine-ship Task Force included IVAN ROGOV and MINSK.[52] By all accounts the operation was a success and it constitutes a disquieting precedent to ASEAN states whose only previous comfort was the fact that the extremely powerful PAVN was completely landbound. The overwhelming land forces of the PAVN combined with the support of SOVPACFLT constitute a new and disturbing element in regional contingency planning. Such possibilities, together with continuing buildup of Soviet forces in Southeast Asia and increasing suspicion of the SRV, have led the ASEAN states to attempt greater cooperation with each other than ever before.

Superpower Involvement

The spirit of *detente* in the 1970s and the Carter Administration's reluctance to be heavily involved in Southeast Asia had induced ASEAN states to be more self-reliant and motivated to put their own house in order. Thus Singapore's Deputy Prime Minister Goh Keng Swee proclaimed in 1979 that 'not one of the ASEAN states believes it can depend on military interdiction by the United States should a communist power mount aggression either directly or by proxy, first against Thailand and later against peninsular Malaysia and Singapore'.[53] The Reagan Administration has been more motivated towards maintaining regional security in Southeast Asia although direct US military involvement is not anticipated by ASEAN states. US Secretary of State Schultz's participation in the meeting of ASEAN foreign ministers in July 1985 in Kuala Lumpur reconfirmed US interests in the region.[54] US interests in the region are bound to increase as the trading relationship burgeons and the Soviet presence makes itself increasingly felt in the South China Sea.[55]

The availability of military facilities in the SRV as forward bases has come as a godsent gift to SOVPACFLT. The main facility is Cam Ranh Bay which is a large, well sheltered and deep water anchorage approximately 120 sea miles north of Ho Chi Minh City (formerly Saigon) and 2,200 miles south of Vladisvostok. It was a popular Soviet anchorage during the Russo-Japanese war of 1905 and has a navigable

entrance almost two miles wide. The naval-air complex lies on the Cam Ranh Peninsula which shelters the bay and was built at great cost to the Americans in the earlier days of their commitment to what was South Vietnam.[56] The US originally built it for the support of 30 warships and support craft but indications are that facilities are being upgraded to host around 40 vessels in addition to nuclear submarines. In the early 1980s docks have been upgraded and installed. Nuclear submarine pens have been built together with necessary maintenance, refuelling and C^3 facilities.[57] Harbour dredging is continuing and the complex has indeed become a major forward base in support of Soviet naval operations in the Indian Ocean/Pacific region. It is now the focal base for deployments in the region and has a permanent base staff of 2,000 personnel. Direct C^3 links to HQ SOVPACFLT and all floating commands in both oceans exist and, for all intents and purposes, the base is completely under Soviet control with the PAVN relegated to an outer perimeter security role.[58]

The naval forces regularly operating out of Cam Ranh Bay (20–30 ships) are twice those deployed in 1983 with the main permanent force comprising the Soviet South China Sea Squadron (SSS). The SSS consists of three major surface combatants (cruiser/destroyer mix), four to five conventional submarines and two FMPB together with a landing craft and from three to ten support vessels.[59] This force is supported by temporary deployments from Vladivostok and it is a potential interdiction force in the heavily trafficked South China Sea where an average of 600 merchant vessels, container ships and tankers can be found on a continual basis.[60] The potential disruption to shipping is quite obviously large as a result of SSS interdiction capabilities.

Interdiction capabilities in the region are also enhanced by the presence of large bomber aircraft equipped for maritime strike, ASW and EW missions. Twin 3,000x50 metre airstrips exist on the Cam Ranh peninsula and they currently support 10–12 TU-16 Badger bombers and 6–8 TU-95 Bear long-range bombers.[61] Evidence points towards the eventual deployment of a full air regiment (25) of Badgers.[62] Tactical escort and all-weather fighter support is provided by a squadron of 14 MiG-23 Flogger fighter-interceptors. Cam Ranh Bay-based aircraft are heavily involved in the monitoring of shipping, especially of US and PRC forces in the Philippines and the Hainan Military District respectively.[63]

The operational and strategic potential of Cam Ranh Bay is, therefore, considerable and it poses a considerable challenge to not only the ASEAN states but also the US and PRC forces in the South China Sea.

Besides the enhanced 'surge capacity' and operational flexibility provided by the combat and logistics support facilities at Cam Ranh Bay, there exist numerous important strategic reasons for further development of the base. The Soviet Navy has traditionally been designed for short term survivability involving the ability to deliver an initial massive blow.[64] Logistical limitations caused by the lack of foreign bases have restricted this combat range and stamina severely. The use of military facilities in the SRV has caused a quantum jump in Soviet ability to sustain operations and project its characteristically coercive diplomacy in the Indian Ocean and Southeast Asian waters. This was evidenced by the deployment, for prolonged periods during the Afghanistan and Iran crises, of ten warships in the South China Sea and thirty in the Indian Ocean.[65] The use of Cam Ranh Bay and Danang are thus logical consequences of Soviet desire to be recognised as a world maritime power which can assertively use its naval presence to support the achievement of international objectives.

From the above, it is obvious that the capability of Cam Ranh Bay cannot be considered in isolation, but must be looked at from the wider perspective of how it can enhance Soviet theatre warfighting and war-sustaining potential in the East/Southeast Asian region.[66] In addition, it must be seen as an increasingly important interdiction base which may degrade US operational flexibility in deploying forces to the Middle East.

On a theatre-wide basis (East/Southeast Asia) US forces would be concentrated in the vicinity of Japan and little reinforcement could be provided to the US South China Sea forces which comprise a carrier battle group force operating out of Subic Bay.[67] In a theatre war, this US force would likely be seriously challenged in conventional operations against Cam Ranh-based Soviet Air/Sea forces supported by the large SRV tactical air force.[68] The SRV would be bound to protect Cam Ranh Bay facilities as any US attack on them would be an effective infringement on Vietnamese sovereignty. Consequently the combined USSR/SRV operational capabilities in the region might ensure the viability of sustained Soviet submarine/mine interdiction force in and around Southeast Asian seas and choke points as well as maintaining limited anti-shipping operations in the South China Sea. This could ultimately affect any sustained US/Japan conventional war effort in the East/Southeast Asian theatre, particularly in terms of constricting fuel supplies to Japan.[69]

The value of access to bases in Vietnam becomes even more valuable to the Soviets if,

for political reasons, the US is forced to abandon its bases in the Philippines and to deploy from far less strategically favourable outposts in Guam, Tinian or even the west coast of Australia.[70] In 1991 the US-Philippines Base Agreement terminates and, if the Americans are forced out of the Philippines, Cam Ranh Bay and the general 'Sovietnamese' complex will take on an even greater potential influence in regional crises.[71] In a wider sense the recession of US operational flexibility in the region would not only hamper American speed of deployment into the Indian Ocean, but also simultaneously enhance Soviet ease of reinforcement to their Indian Ocean fleet (normally 6–12 ships).[72] In turn such a recession in US flexibility would have repercussions on any Middle Eastern crises.[73]

ASEAN Response to Threats

Rival USSR-US strategic interests in the Asian-Pacific region will be a persistent factor in ASEAN's considerations for defence. It is quite certain that the US will not be prepared to involve itself in another major regional conflict of the magnitude that resembles the Vietnam saga. Nevertheless, ASEAN can also be quite certain that the US will launch counter strikes against the Soviets, but that such conflicts will have escalated to the theatre level. The responsibility for ASEAN is therefore to manage regional rather than theatre crises. For instance, it should deal with 'Vietnamese expansionism' on a self-reliance basis.

In July 1983, Singapore's second Minister of Defence, Dr Yeo Nung Hong, remarked as follows:

> The military capabilities of the ASEAN countries should be enhanced to the level necessary to meet external threats in order to deter aggression. Co-operation among ASEAN countries can be strengthened.[74]

However ASEAN states have done little more than pay lip service to this fundamental doctrine of deterrence. Efforts to maximise deterrence through increasing combat power can only be achieved if regular, multilateral military exercises dealing with major contingencies are carried out. This has not been done largely due to fear of 'Sovietnamese' disapproval.

If, as Malaysia's Deputy Prime Minister Datak Musa Hitam says 'all the rules of the peace game in South-East Asia were violated when Vietnam marched into Kampurchea', it is hard to understand ASEAN's continued reluctance to maximise its deterrent credibility.[75] Hitam also stresses that 'the security of each of the countries of the region is interlinked and . . . the security of each of the ASEAN states is indivisible.'[76] Consequently ASEAN is fully justified in rallying to form a genuine military identity in the region.

With the development of ASEAN multilateral cooperation, prospects for the defence of non-communist Southeast Asia will improve dramatically. ASEAN can then develop concrete contingency plans which would have the effect of maximising strengths and minimising weaknesses. For example, a strategy could be developed for a defensive blocking action against the SRV by engaging SRV forces on the narrowest possible land front. This occurs on the isthmus of Kra (Thai territory) which narrows to 40 miles width. ASEAN could then capitalise on its combined air and naval superiority by securing the flanks of its land forces and supporting ground operations generally. Such viable defence plans could not be contemplated if ASEAN states were to stand against the massive and very capable SRV land forces alone.

This ASEAN 'Thermopylae' plan, together with practices in the organisation needed to implement it, would maximise the chance of US support under the Guam Doctrine of 1969, in which America expected to see a substantial level of self-reliance exhibited by those requesting its help.[77]

In summary, the increasing naval presence of the SOVPACFLT in the disputed waters of Southeast Asia has exacerbated ASEAN fear of 'Vietnamese expansionism' in the region. Soviet use of SRV facilities enhances SOVPACFLT's operational flexibility and interdiction capabilities in the East/Southeast Asian theatre and the Indian Ocean. The uncertainty of future US naval commitment in the region and the increase in PRC naval presence in the waters of the South China Sea also cause concern amongst ASEAN leaders.

These strategic considerations for the present and the future are the key to any in-depth understanding of naval developments in Southeast Asia. ASEAN naval planners recognise the hazardous implications of superpower rivalries in the region. However, they have not taken a positive approach to maximising the naval contribution to regional security. Political reasons are to a large extent responsible for their predicament.

ASEAN states have the combined naval forces and land-based air capacity to pose a serious obstacle to 'Sovietnamese' expansionism. At this stage the loose system of infrequent bilateral ASEAN naval/air exercises has not optimised ASEAN defence potential. Should an ASEAN initiative be made to conducting systematic multilateral exercises, the prospects for posing a viable deterrent to external threats will be in the offing.

CONCLUSION

The United States maintains a clear margin of maritime superiority in the Asia-Pacific region while the Soviet Union is severely constrained by force structure imbalances and geographic factors. SOVPACFLT force structure imbalances indicate that it is not capable of seriously challenging US naval forces outside the effective air cover of land based Soviet Naval Aviation (1,500 nm) and a sustained interdiction of shipping campaign is not presently viable. Even the substantial SOVPACFLT submarine arm has serious operational limitations in the high seas of the Pacific and Indian Oceans. Consequently, it would appear that SOVPACFLT has no real option in a theatre war but to fight a defensive campaign within the seas of Japan and Okhotsk.

There is little doubt that the Northern Pacific region is considered a secondary theatre by the Soviets and SOVPACFLT is certainly capable of satisfying the job of substantially contributing to the defence of the Soviet land and sea-based strategic deterrent forces in the Far East. This is probably all that is required of it in a global war.

The clear US naval dominance in the region gives rise to little disagreement between the superpowers as to their relative power. This lack of disagreement promotes regional stability since the Soviets are aware of their limitations in the area and appear to have tailored their objectives accordingly. Of course, moderate, non-provocative expansion of Soviet naval power in the region will always be considered worthwhile by the Politburo.

Against this stable background of US naval superiority the indigenous naval forces of Japan, the PRC and ASEAN are developing more balanced force structures capable of satisfying their immediate national interests. But even more importantly, naval developments among these 'smaller players' are contributing to the maintenance of the maritime status quo in the region. By discretely doing what they can to preserve the Pacific as an 'American Lake' the smaller players can promote stability, thereby serving their own best interests.

NOTES

1. G. Blainey, The Causes of War, (Sun books, Melbourne, 1973) p.207.
2. Soviet exercise areas may indicate what SOVPACFLT sees as its 'Sphere of Influence' in the Pacific. These areas are limited to the seas of Okhotsk and Japan (see Chart 1). This sphere of influence contrasts sharply with US FLEETEX exercise areas. The USN regularly deploy and exercise throughout the Pacific and Indian Oceans.
3. *The Marine Strategy* US Naval Institute, January 1986, p.9.
4. *Ibid.*, p.7.
5. *Ibid.*, p.10.
6. P. Dibb 'The Soviet Union as a Pacific Superpower', *Pacific Defence Reporter*, November 1984, p.23.
7. Deep broad Oceanic trenches in the vicinity of Petropavlovsk facilitate Soviet submarine infiltration into the high seas of the Pacific. Vladivostok based submarines have no choice but to exit by the Japanese straits. There is no other low risk means of entry into the Pacific during an activated situation.
8. This family of ASW mines is very effective against submarines at intermediate depths. The MK 60 can also be air deployed in deep water. However, the MK 56 would bear the brunt of the ASW task in the area since it is air deployed and extremely versatile. (See Navsea Mine Familiarizer, Naval Mine Engineering Facility, Yorktown VA for an unclassified summary of the capabilities of these mines.) It should be remembered that the Soviets are particularly sensitive to mine blockades as a result of their disastrous World War II naval experience. At the beginning of World War II the Soviets had the largest submarine fleet in the world, based in harbours around Leningrad. A strategic mine blockade conducted by the Germans on the eve of hostilities rendered the Soviet fleet impotent for the next four years.
9. See G. Jacobs, 'Soviet-Pacific-Based Strike Forces', for an account of Soviet Naval Air Capabilities in the North-West Pacific, *Asian Defence Journal*, January 1986, pp.12–21. Combat support radii for SNA units is discussed on p.16.
10. Report of the Atlantic Council Working Group on Securing the Seas, *Securing the Seas: The Soviet Naval Challenge and Western Alliance Options*, (Boulder, Colorado: Westview Press, 1979), p.74.
11. *The Maritime Strategy*, *op.cit.*, p.12.
12. Committee on Armed Services, US Senate, Fiscal Year 1979, Department of Defence Authorization (Washington, D.C.: US Government Printing Office, 1978), Part 5, p.4321.
13. Committee on Armed Services, US Senate, Fiscal Year 1985 (Washington, D.C.: US Government Printing Office, 1984), p.3887.
14. The designation "High Threat" is an official USN designation indicating zones of operation which should only be forced by CVBG protected by full F-14 CAPS (Combat Air Patrols). These can be maintained by Nimitz Class CVN. Alternatively, these areas may be forced using a mix of F14 with F15 land based support, or F-18s backed by F4s (as deployed on Midway class carriers).
15. It is obviously impossible to predict an escalation progression which will or will not result in an all out global war. However, great restraint can be expected of both sides before the nuclear threshold is crossed. Tactical nuclear weapons might very well be used without resort to the use of strategic missile systems. In particular, the Soviets will be sorely tempted to use tactical nuclear weapons in ACW. Direct, high intensity naval engagements between the superpowers need not lead automatically to the use of strategic missile systems if the vital strategic interests of both

players are left relatively undamaged. The US may be able to wage a strong ASW campaign in the bastions under non-nuclear conditions as long as the Soviets feel that their vital land based interests are not directly threatened as a result. In Phase II of Watkin's Strategy (seizing the initiative phase) he states '. . . Finally, seizing the initiative opens the way to apply direct pressure on the Soviets to end the war on our terms'. *(Maritime Strategy, op.cit.,* p.11). The Americans may therefore believe the Soviets can be induced to accept war termination while still in this phase and under heavy offensive military pressure.

16. See Jacobs, *op.cit.*, p.21 for a useful table indicating the characteristics of Soviet Naval Air-to-Surface missiles as deployed by SOVPACFLT SNA. SNA Aircraft characteristics are also summarised on p.20.
17. D. Fitzgerald, 'The Soviets in South-East Asia', US Naval Institute, *Proceedings*, February 1986 Vol.112/2/996, p.56.
18. Testimonies of Admirals Long, Crowe and Hays to mention only the last three CinCPacs paint a clear picture of a rapidly escalating Soviet naval presence in the Pacific. For example, see Admiral William Crowe (last CinCPac and now CJCS) 'US Cannot and Should not go it alone in the Pacific', *Pacific Defence Reporter*, August 1985, pp.12–15.
19. It is true that Soviet warships are heavily armed, however, multiple launch systems on board Soviet surface combatants are more the exception than the rule. Soviet vessels have traditionally been designed to fight a war of the 'first blow' and not sustained battles. Though evidence exists that the new classes of Soviet surface combatant are adopting a different design criteria, the case with most Soviet combatants is 'What you see is what you get' in terms of externally mounted armaments. US warships give the impression of being sparsely equipped with launchers, but extensive Rotary-feed magazines exist below deck.
20. Report of the Atlantic Council Working Group on Securing the Seas, *op.cit.*, pp.114–116.
21. The Maritime Strategy, *op.cit.*, p.35. Pages 32–40 give Lehman's comprehensive rationale for the development and use of the 600 ship USN.
22. *Ibid.*, p.35.
23. B. Swanson, 'Naval Faces', in Segal, G. and Tow, T.W. (eds.), *Chinese Defence Policy*, Macmillan, London, 1984, p.91. The latest Chinese acquisition of Super Pumas which will enhance Chinese ASW capabilities. See 'French Ship Super Pumas to China', *Aviation Week and Space Technology*, 28 October 1985, p.24.
24. Helicopters are high utility vehicles both in the coastal ASW mission and in the coastal AS mission. Low silhouette, high manoeuvrability and capability to deploy from camouflaged positions on the coast give helicopter operations major advantages in the counter amphibious battle. With regard to increased J-8 capabilities see 'US Avionics for Chinese F-8s', *Flight International* V 129 (4007) 19 April 1986.
25. *The Military Balance 1985–86*, IISS, London, 1985, p.114.
26. *Asian Security 1984*, Research Institute for Peace and Security, Tokyo, pp.203–206.
27. 'Japan Allocates $16.5 Billion for Defence', *Aviation Week and Space Technology*, 6 January 1986, p.17. See also *The Military Balance 1985–86*, p.126.
28. 'Threat and Counter Threat in war games around the Islands', World Review 3, *The Australian*, Nov. 21, 1985, p.11.
29. *Ibid.*
30. 'Japan Allocates $16.5 Billion for Defence', *op.cit.*, p.17.
31. A standard Indonesian view can be found in J.S. Djiwandono, 'Developments in the Asia-Pacific region and relations between the USSR and the USA', *Indonesian Quarterly*, XIII, 1, 1985, pp.100–105. See also J. Wanandi, 'Conflict and cooperation in the Asia-Pacific regions: an Indonesian perspective', *Asian Survey*, XXII, 6, 1982, pp.503–515 and Lee Poh Ping, 'The Indochinese situation and the big powers in Southeast Asia: the Malaysian view', *Asian Survey*, XXII, 6, 1982, pp.5167–523.
32. S.W. Simon, 'David and Goliath: small power—great power Security relations in Southeast Asia', *Asian Survey*, XXIII, 6, 1983, pp.309–10.
33. Djiwandono, 103.
34. J. Wanandi, 'Seeking peace amid Cambodia's conflict', *Far Eastern Economic Review*, 8 March 1984, pp.34–36.
35. Tasker, 'Divided on Peace. Thai and Indonesian differences persist over Cambodia solution', *Far Eastern Economic Review*, 24 april 1986, p.47.
36. *Ibid.*
37. K. Whiting, 'ASEAN's dominoes are still standing', *South China Morning Post'*, 8 July, 1984.
38. M. Vego, 'The potential influence of Third world navies on ocean shipping', *US Naval Institute Proceedings: Naval Review*, 107/5/939, May 1981, p.109.
39. *Ibid.*
40. Captain R. Miller, USN, 'Indonesia's Archipelago Doctrine and Japan's Jugular', *US Naval Institute Proceedings*, 99/10/936, October 1972, p.31.
41. *UN Yearbook of International Trade Statistics*, I, 1982, p.554.
42. See *Janes Fighting Ships 1984*
43. The relatively limited 'searoom' available in Southeast Asian waters provides for rapid concentration of forces. This factor, together with the lack of endurance of FMPB and fighter-bombers, would contribute to short, sharp encounters in which the emphasis is placed on applying as many weapons as possible and as soon as possible.
44. Vego, 98.
45. 'Singapore: The reserves provide the teeth', *Pacific Defence Reporter*, October 1983, p.21.
46. Colonel J. Fitzgerald, 'Malaysia: Defence in transition', *Pacific Defence Reporter*, March 1984, p.28. Note that Malaysia will have 40 refurbished A4 aircraft on inventory by 1987. See also *Pacific Defence Reporter*, April 1985, p.27.
47. M. Richardson, 'ASEAN extends its military ties', *Pacific Defence Reporter*, November 1982, p.55.
48. B. Hahn, 'South East Asia's miniature naval arms race', *Pacific Defence Reporter*, September 1985, p.22.

49. *Ibid.*
50. *Ibid.*
51. *Ibid.*
52. 'Crisis in South East Asia's Security environment', *Asian Defence Journal*, September 1984, p.54.
53. M. Richardson, 'Defending South East Asia', *Pacific Defence Reporter*, February 1985, p.8.
54. R. Tasker, 'Doomed from the start: ASEAN again fails to agree on a Cambodia solution', *Far Eastern Economic Review*, 25 July 1985, p.19.
55. See M. Leibstone's interview with US Secretary of the Navy Lehman, 'The US Secretary of the Navy: Towards a 600-Ship Fllet', *Naval Forces* No.1/1986, Vol. VII, p.19–20. Lehman emphasised that in 1986 trade between the US and Pacific Rim nations exceeded US-Atlantic trade by $US26 Billion.
56. *ASEAN Forecast*, 14, 6, June 1984, p.97.
57. *ASEAN Forecast*, 14, 6, June 1984, p.101.
58. B. Bilveer, 'Soviet military presence in Indochina', *Asian Defence Journal*, August 1985, p.30.
59. See *Indochina Intelligence Report*, 1 September 1985 and B. Schemmer, 'The Pacific Naval Balance', *Armed Forces Journal International*, April 1984, pp.32–43.
60. *ASEAN Forecast*, 14, 6, June, 1984, p.103. From the southern end of the Malacca Strait to Taiwan the South China Sea extends 1,700 miles.
61. *Indochina Intelligence Report*, 1, 1, September 1985.
62. A. Khalid, 'Crisis in Southeast Asia's security environment', *Asian Defence Journal*, September 1984, p.54.
63. P. Dibb, 'The Soviet Union as a Pacific Military Power', *Pacific Defence Reporter*, November 1984, pp.23–24.
64. G. Jacobs, 'Is the Soviet Navy all that it is cracked up to be?', *Pacific Defence Reporter*, Dec 1982/Jan 1983, pp.72–79. This article gives an account of the significant limitations of Soviet warfighting and war-sustaining capabilities.
65. *ASEAN Forecast*, 14, 6 June 1984, p.103.
66. A common mistake analysts make is to treat Soviet forces operating out of Vietnam as unsupported entities which would rapidly fall prey to the might of the Seventh Fleet. Tactical air support to the SSS from the increasingly capable SRV Airforce is a factor which must be taken into account. This Airforce includes 4 Interceptor Air Regiments comprising 180 Mig 21 1615/F/PF aircraft. (See M. Richardson, 'The F-16 for Southeast Asia: Arms race or strategic balance?', *Pacific Defence Reporter*, May 1985, p.19.) Also, in a theatre war scenario, the SSS and its Soviet Naval Air support based in Vietnam would probably be up against only 16–25 per cent of the US Pacific Fleet (see note 51).
67. Subic Bay is certainly the largest US Naval Base outside the United States. However, it is primarily a supply and maintenance complex and is not an operation headquarters for much more than the 1.5 Carrier battle group force generally based there.
68. It is an oversimplification to suggest that Soviet forces operating out of Vietnam could be 'rapidly destroyed' by US forces based in the Philippines and Guam (see Dibb, 24). An unreinforced 13th Airforce (Clarke Base) could deploy a fighter wing but this would be incapable of making unrefuelled attacks against Cam Ranh Bay which lies 800 miles to the south-west. However, even if the entire Guam-based B52G Wing could be dedicated to South China Sea operations it would not have an easy time against the SRV interceptor Air Regiments, ground air defences and Soviet Naval-Air bomber and fighter units based in Vietnam. This remains the case even if a 1.5 US Carrier battle group force is deployed to the South China Sea. It must be remembered that only 2–3 squadrons (24–36 aircraft) of a US carrier air wing (80–90 aircraft) are air superiority squadrons. This number of aircraft compares unfavourably to the 200 interceptors which are available to the Soviet SRV forces in the area. It is therefore possible that 'Sovietnamese' air superiority could be achieved within a few hundred mile radius of the SRV coast. Consequently, even a modest SSS operating with air superiority could in theory stave off US attacks.
69. A short conventional theatre war cannot be taken for granted. Japan imports almost 85 per cent of its crude oil requirements from the Middle East and Indonesia. If these sources were compromised then deliveries from Venezuela and the United States would be the only alternatives. However, only a small fraction of Japanese requirements would be met from these sources, especially considering the heavy US demand for oil, most of which comes from the Middle East.
70. See *The Australian*, 'Alliance "vital" to US Military', 8 March 1985, p.4.
71. See 'How vulnerable are the bases?', *Newsweek*, 5 November 1985, 108/5492, pp.122–123.
72. *Indochina Intelligence Report*, I, 1 September 1985.
73. The important 'leverage' derived from the rapid deployment of highly visible surface forces to the Middle East in times of crisis is a vital advantage. For a description of the importance of prompt US deployment during the India-Pakistan War of 1971 see Lieutenant Commander K. McGruther, USN, 'The role of perception in Naval Diplomacy', *Naval War College Review*, XXVII, 2–251, September-October 1974, pp.5–19. See also Commander J. McNulty, USN, 'Naval Presence — The misunderstood mission', XXVII, 2–251, pp.21–31.
74. M. Richardson, 'Defending South East Asia', *Pacific Defence Reporter*, February 1985, p.5.
75. For an address to the Harvard Club of Singapore by the Malaysian Deputy Prime Minister, Datak Musa Hitam, see *Asian Defence Journal*, July 1984, p.14.
76. *Ibid.*
77. During the Vietnam War, American preparedness to take on the 'lion's share' of an Asian country's defence led to disaster. In 1969 Nixon spelled out his doctrine that US allies should aim for defence self-reliance in all but the most serious scenarios involving superpower aggression. Consequently the chance of US direct intervention in Southeast Asia would be maximised if Americans saw a 'viable proposition' in terms of a united and self-reliant ASEAN making a determined stand against communist aggression.

WASHINGTON NOTES

by Tom Friedmann

'What do you think of "Rambo" Reagan?' This question has been posed to me in one form or another by many Australians since the April 15 bombing raid by elements of the United States Air Force and Navy against Libya. The answer is not a simple one.

Current US-Libyan tensions were triggered by the nearly simultaneous December 27, 1985, attacks by terrorists on the Rome and Vienna airports. Twenty civilians were killed in these incidents including five Americans who died in Rome. A reported 114 people were wounded. US officials, according to press reports, said that circumstantial evidence pointed to the Abu Nidal Palestinian faction as responsible for the attack. Abu Nidal was, they said, headquartered in Libya.

On March 24, 1986, Libya fired SA-5 surface-to-air missiles at US aircraft operating in international airspace over the Gulf of Sidra. Later that day a Libyan patrol boat was sunk by American forces after it was determined that she was preparing to attack US ships in the Gulf.

The incident that precipitated the American raid was the bombing of a West Berlin nightclub which killed two people, one a US Army sergeant, and injured 204, some 60 of whom were American Servicemen.

President Reagan had long made it clear that he considered Libya's leader, Mu'ammar al Qadhafi, the major force behind these and other attacks against US interests in Europe and the Middle East. The President now had his chance to strike back. The manner in which the attack was planned and executed, however, showed off the American intelligence and military communities at their worst — and their best.

The attack was preceded by a series of some of the worst breaches of security in American history. The disposition of the Sixth Fleet, and particularly its aircraft carriers, was widely reported in the media for days before the attack, as were the reasons for their deployment. If Qadhafi did not know the US was going to attack it is simply because he was not monitoring the nightly news broadcasts of the American television networks.

The US Information Agency was informed of the pending attack by the White House (reportedly without Pentagon knowledge) hours before its execution and well before congressional leaders had been informed, in order to prepare a broadcast to Libya justifying the attack.

Soon after the raid was announced, the President divulged that we had known of Libyan involvement in the West Berlin bombing because we had intercepted messages between Tripoli and the Libyan 'People's Bureau' in East Berlin.

The White House later tried to blame its political opposition (and Senate Minority Leader Robert C. Byrd [D-W.Va.] in particular) and the media for administration's incompetent handling of security surrounding the mission. The mud was slung but failed to stick. The blame remained where it should have been all along — with the administration.

One of the most disturbing aspects of the attack was that it bore all the marks of yet another skirmish in the continuing Battle of the Budget. 'The budget,' said William Broyles, Jr., in *US News and World Report*, 'in short, (was) the mission'.

The Navy had shown a high profile in the Mediterranean in the year preceding the raid. The Air Force needed the publicity to help justify its budget request and in a noteworthy show of interservice cooperation, the Navy took a backseat to the Air Force in the execution of the Libyan attack. Commendable as this cooperation was, it presented many questions that are as yet unanswered.

The obvious question is why the Air Force was needed at all. At the time of execution, some $40–$50 *billion* of naval weaponry, in the form of two carrier battle groups, was only some 200 miles from the Libyan coastline. If two carrier battle groups were unable to take out a handful of Libyan targets, the time has come to ask some serious questions about the continued relevance

of the large carrier in today's naval environment. But what should happen and what will happen are two entirely different things.

Rather than permitting the Navy to have a further disproportionate share of the headlines, Air Force commanders sent aircrews on a 5,000 mile trip which required a fleet of 28 tankers to refuel the aircraft four times enroute.

Twenty four F-111s, aircraft some 20 years old and unmodernized, took off from the United Kingdom. Of these, 13 attacked, six were spares, and five were forced to abort, the latter being a rather high figure for what was termed a 'flawless mission' by the Department of Defense.

Lest I be accused of placing too much emphasis on just the Navy-Air Force rivalry, one could ask why a battleship is not permanently on station in the Med so that shore targets could be hit from well out at sea by its uncannily accurate 16-inch guns. Of course, that would require modern ammunition for the guns which has yet to be manufactured. But it would also justify the existence of the battleships in the fleet, something which the naval aviation lobby is loath to concede.

As for precision bombing itself, there is an old soldier's warning: 'Trying to do precision bombing with an aircraft is like trying to do brain surgery with a bayonet'. Obviously, the very highest echelons in the Defense Department believed that all of the money that had been spent on smart weaponry had somehow actually *managed to make war more 'civilized'* by permitting a true 'surgical strike' that would destroy a military target while not injuring civilians in the surrounding area. What we learned is that the accurarcy of precision bombing has not improved all that much since legendary RAF Mosquito bombings of the Second World War.

It is interesting that the Pentagon itself estimated that the accuracy for bombing specific targets at night is '80 percent or better,' despite the use of 'smart' bombs. Put another way, one bomb in five will miss its target by three quarters of a mile or more. Not much to worry about on a battlefield, but potentially disastrous when bombing in a heavily populated metropolitan area.

Someone must have forgotten to cite these statistics to Secretary of Defense Caspar Weinberger, who, when informed that some of the bombs had hit the French Embassy, replied: 'That would be virtually impossible'.

Even placing unusually strong emphasis on the qualifying 'virtually,' the Secretary's response ranks right along with 'this ship is unsinkable', 'they will never attack us', and (a personal favorite) 'home before Christmas'. And if Secretary Weinberger believed the bombs would not stray, it is a pretty safe bet President Reagan believed the same thing.

One aspect of the raid was beyond reproach. Our airmen, both Air Force and Navy, exhibited great courage and skill in executing an intricate and dangerous mission over great distances under harsh conditions.

The immediate diplomatic response was disastrous. Few nations gave us public support. Arab states, many of which view Libya and her mercurial leader with as much abhorrence as does the United States, felt it necessary to support a fellow Arab nation against outside attack. While the raid was very unpopular within NATO, it was interesting to see how many Libyan 'diplomats' were expelled from NATO countries in the days following the raid. Prime Minister Margaret Thatcher was forced to pay a high political price (and the United States forced to call in some valuable markers) when she gave her permission to use British bases to mount the attack.

But of all countries, France suffered the worst when her government, despite French public support for the mission, refused overflight rights. The notion that NATO members should be able to continue to exercise sovereign rights, such as the refusal to grant the use of air space for military purposes without being accused of being a 'false' ally, received short shrift in the US.

More important, however, was France's position that she would have been willing to consider a concerted effort that would be sufficient to take care of Qadhafi once and for all. The attack, which failed to either topple Qadhafi or put the installations attacked out of action for any appreciable time, may only have served to give the Libyans (and their Soviet backers) notice to upgrade their air defences.

The French had a valid point. Our not-too-distant history shows the danger of such half-hearted military action. Similar air attacks on North Vietnam in the summer of 1964 not only failed to either shock the country's leaders or disrupt its war economy. Rather, they served as a warning to the North Vietnamese that their defences had to be improved. Retired Air Force General William W. Momyer, who commanded the Seventh Air Force in Vietnam from July 1966 until August 1968, has written that 'we had merely alerted them (the North Vietnamese) to start work on what would become a superb air defence system of MIGS, surface-to-air missiles and anti-aircraft artillery'.

Most important of all, there is no evidence that the attack has deterred Libya, Syria, Iran, or the Soviet Union for that matter, from supporting and promoting international terrorism.

All of this having been said, I believe that the

President was justified in ordering the Libyan attack. He had clear and convincing proof that the Libyan government was at least behind the Berlin bombing. It is a basic right of every citizen to expect his government to protect his freedom to live, travel, and work in safety. It is a basic element of sovereignty to do so.

The terrorism against Americans in Europe and the Middle East stems from the execution of a foreign policy that a majority of Americans support. That policy is set by the President and he must, as chief magistrate and commander in chief, protect American citizens from the ramifications of its execution.

Politically, President Reagan had to take action and military action may have been his most viable option. He was hemmed in, not only by his bombastic rhetoric but by his well known rebuilding of the armed forces. Intellectual arguments about the differences between nuclear and conventional warfare and terrorism aside, the American people had the right to question the expenditure of hundreds of billions of dollars on defence when they saw their fellow citizens being killed in airport lobbies and in nightclubs. They could well ask whether the money was being wisely spent if Americans could not travel abroad in peace in security.

But President Reagan's greatest failure has been his failure to *lead* the Western Alliance. There was room for aggressive diplomacy before the raid and there is still room for him to shape, rather than be shaped by, developments. Some examples:

A common position on terrorism should be within the realm of possibility for NATO, Japan, and Australia. Terrorism must be stopped, whether its perpetrators are Catholic, Protestant, Jewish, or Moslem; whether they be black, white, red, or yellow skinned; and whether they be Irish, British, Israeli, Syrian, German, Italian, Iranian, or South African. The Allies have the moral, economic, and military power to eradicate this scourge through the execution of a common policy against terrorists and those nations which foster terrorism and harbor terrorists. And this includes the Soviet Union.

Every nation must understand it is a target when any other nation is attacked. Europeans justifiably point out that Americans are attacked on their territory and their citizens are injured along with ours. But no nation can escape. To their discredit, Italy and France negotiated agreements with terrorist organizations thinking they could evade attack. The Rome bombing and the kidnapping of French citizens in Lebanon points out yet again that appeasement never works. To paraphrase Churchill, 'peace with honour' to save lives in these cases inevitably lead to dishonour and more killings.

If the United States asks sacrifices of its allies, it must be willing to make the first sacrifice. The Congressional Research Service estimated earlier this year that American investment in Libya only totalled some $400 million to $1.5 billion. Although many were important jobs in the oil industry, only about 1,000 Americans were in the country. Comparative figures for Italy alone were some $7 billion in investments with some 8,000 to 15,000 Italians in residence. Obviously, the importance of Italy's economic ties to Libya was far greater than our own. While the American government is calling for the economic isolation of Libya, some American companies are still operating in the country as of the date of this writing (June 23) and will not be fully required to divest themselves of their Libyan investments until June 30. Why should other nations comply with the requests of the United States government if its own citizens are exempted from compliance? The President must learn how to lead and leading by example is one of the most effective ways there is.

There can be no room for discussions with terrorists. All nations — including Israel — have yielded to pressure to negotiate with terrorists. France and the US for example, are both currying favor with Iran in the hope of securing a better position in that nation after Khomeni's death. Such actions only strengthen the hands of terrorists and the regimes that protect them. At the same time, they breed confusion and dissension in both government circles and the general population of the target countries. There can be no negotiation with terrorists. No treating with criminals. The rule should be made hard and fast and should be adhered to. Many will die if this policy is adopted and enforced but more will die if it is not.

I wish these suggestions would have broken new ground in reaching an overall settlement of the problems of the Middle East. They do not. But they are so basic as to bear repeating and so simple as to merit action. Until these first, simple steps are taken by the West, the succeeding, more complex ones cannot even be considered. And the time to take action, as the twentieth year of the Israeli occupation of the West Bank grows near, is running perilously short.


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OF SHIPS AND THE SEA

JAMES BAINES AND THE BLACK BALL LINE

The 1850s were a time of increased trade between England and Australia and the focal points were the ports of Liverpool and Melbourne. One of the leaders in this increasing trade was the slightly built shipowner Mr James Baines, born in 1823 in Upper Duke Street, Liverpool. Little is known of his early life but he achieved prominence shortly after buying his first vessel in 1851. Described as a 'pork barrel', this ship was an immediate success, and very soon afterwards he bought a second vessel, the Canadian built full rigger *Marco Polo*. This ship and her captain set James Baines and Company on the road to world wide recognition. Baines and Co adopted the name Black Ball Line, a name he took, together with houseflag from the American Packet Line.

Blackballers as they came to be called soon became renowned for their fast, comfortable passages to Melbourne. Well run and clean, their distinctive colour schemes of black hull, white deckhouses, blue waterways, white masts and black yards were always covered in a press of canvas.

Naturally, Mr Baines was not alone in the UK — Australia trade. Out of Liverpool sailed a vast fleet which included vessels owned by the following shipowners:

- J Pilkington and H T Wilson (White Star Line)
- Henry Fox (Fox Line)
- Miller and Thompson (Golden Line)
- The Fernie Brothers (Red Cross Line)
- James Beazley

Although British shipyards were turning out well found and reliable vessels, Baines and Company looked to the softwood ships of the American genius Donald Mackay, a man who it could be said was well ahead of his time in ship design. *Lightning* was ordered from the Boston yards of Donald Mackay and whilst she was being built, Baines chartered *Sovereign of the Seas* for one voyage in 1853.

He did not neglect the British shipbuilders, taking delivery of the ill-fated *Schomburg* from Hall of Aberdeen, but he seemed set in his ways to own a large number of 'Yankee Clippers'. His entire fleet of ships is too numerous to mention, but the table below sets out some of his vessels of North American origin.

Southern Express (ex Jacob A Westervelt)	1849	New York
Tornado	1851	Williams, New York
Flying Cloud	1851	W M Webb, Boston
Queen of the Colonies (ex Wizard)	1852	Donald Mackay, Boston
Young Australia	1853	Portsmouth, Virginia
Landsborough	1853	
Whirlwind	1853	J D Curtis, Medford, Mass
Saldanha	1853	Quebec
Fiery Star	1851	Webb, New York
Light Brigade (ex Ocean Telegraph)	1854	J D Curtis, Medford, Mass
Royal Dane (ex Sierra Nevada)	1854	Portsmouth, Virginia
Elizabeth Ann Bright (ex Tam O'Shanter)	1856	St Johns, New Brunswick
Sovereign of the Seas (II)	1856	Hillyard, New Brunswick
Sunda	1856	Desmond, Miramichi
James Baines	1854	Donald Mackay, Boston

Contracts for the carriage of mail to Australia were negotiated in 1855, due mainly to the Black Ball Liners, in particular *Lightning*. Her maiden voyage in 1854 demonstrated that a letter could be written and dispatched to Melbourne and a reply received in Liverpool within the same year. Competition for the contract was fierce with the White Star Line (Pilkington and Wilson), undertaking to land mail at Melbourne in 68 days or pay a one hundred pound per day penalty in default. Not to be outdone, James Baines and Company won the contract by reducing the agreed passage time to 65 days with the same penalty provisions.

By 1860 the Black Ball Line consisted of eighty-six vessels employing three hundred officers and three thousand seamen. The same year James Baines and Company started to diversify, entering into partnerships, the most notable being with Gibbs Bright and Co, and into steamships. In the same decade he moved into the Queensland emigrant trade with the ships *Empress of The Seas*, *Flying Cloud* and *Sunda*, the first two having the distinction of carrying the first sheep exports from Australia to New Zealand.

Somewhere along the line after this, the bubble burst and by the middle of the 1880s James Baines was penniless living off the charity of friends. He died of dropsy on 8 March 1889 and was buried near his old employee, Captain J N Forbes.

For the technically minded, further details of

four of the more famous Black Ball Liners are given in the following paragraphs.

Marco Polo

Wooden ship built in 1850/51 by Smith and Company, St Johns, New Brunswick with the dimensions of 185ft (bp) x 38 ft beam, 2500 tons gross and 1625 tons registered. Her maiden voyage was from Mobile (USA) to Liverpool with cotton. For some reason she was put up for sale, being bought by Mr Paddy McGee and almost immediately resold, at a profit, to James Baines.

The first voyage to Australia as a Black Ball liner in 1852 was under charter to the Government Emigration Commissioners and she carried 930 emigrants. Two surgeons were borne plus 30 seamen. The ship's company was boosted by an additional 30 seamen working their passage to Victoria. Captain J N (Bully) Forbes was in command with Charles McDonald as Chief Mate.

Departing Liverpool on 4 July, *Marco Polo* arrived inside Port Philip Heads on 18 September — a record passage of 68 days, beating the steamer *Australia* by seven days. During the passage, the best recorded speed was 15 knots and over one four day period she averaged 14 knots. On his arrival at Hobson's Bay, Captain Forbes noted that almost fifty ships lay idle, their crews having deserted to join the gold rush. To avert such a crisis, Captain Forbes charged all his crew with insubordination and had them imprisoned. Come sailing day they were released, rejoined their ship and were ready for the return leg of the voyage.

She departed Melbourne at 5.00 am on 11 October and arrived at Liverpool on 26 December 1852, having completed the round trip in 5 months, 21 days. Best speed recorded on the homeward leg was 14.7 knots. Amongst the cargo was a present for Queen Victoria — a 340 ounce gold nugget and gold dust to the value of 100,000 pounds. The steamer *Australia*, once again in the race, was beaten by eight days.

Her second voyage to Australia commenced on Sunday 13 March 1853, carrying 648 passengers and 90,000 pounds of specie. This voyage was not a record breaker, taking 75 days arriving at Melbourne on 29 May. On the return leg to Liverpool she left Port Philip at 5.00 pm on 10 June with a full cargo including 40 cabin passengers and 280,000 pounds worth of gold dust. The return leg took 95 days, but the total voyage served to enhance the reputations of both James Baines and Captain Forbes. The round trip took six months exactly.

Captain Charles McDonald assumed command from Bully Forbes (he was to command *Lightning)* for the third voyage, 1853/54 – 72 days out and 79 days home. On the return to Liverpool, Captain McDonald was transferred to a new command, the ship *James Baines*.

Subsequent voyages (1854/55 — Captain Wild and 1855/56 — Captain Clarke) were not record breakers but the ship's popularity remained. In late 1855 *Marco Polo* had her first accident; she collided with a barque and then grounded in the River Mersey, fortunately without any damage. In 1861 she collided with an iceberg on 4 March whilst on the return from Melbourne. Damage was quite severe and it was a toss-up whether or not she should be abandoned. However, *Marco Polo* eventually made Valpariaso for repairs and continued on to Liverpool, 183 days out from Melbourne.

Sold to another Liverpool shipowner in about 1862, *Marco Polo* continued in the Australian trade beating, in 1867, the renowned *Great Britain* by eight days. Sold to Wilson and Bain of South Shields she eventually passed to Norwegian owners and was used on the North Atlantic pitch-pine trade. *Marco Polo* finally ran aground on Prince Edward Island (Canada) in August 1883. She ship and her cargo were sold for 600 pounds at auction.

Lightning

Wooden ship built by Donald Mackay of East Boston (USA) in 1853–54 at a cost of 30,000 pounds with subsequent furnishing cost of 2,000 pounds. Her dimensions were length 244ft (bp), beam 44ft, depth 23ft and 1,468 registered tons. Under all plain sail she spread 13,000 square yards of canvas. Her spar measurements were foremast 151ft, mainmast 164ft, mizzenmast 115ft with the mainyard measuring 95ft. Originally rigged to carry skysails, James Baines had her re-rigged to carry moonsails above the skysails. She was quite unique in deck space, and passenger comfort. The poop was 92ft in length and the main saloon 86ft. Between-deck space was an unprecedented 8ft under the beams.

Captain Forbes superintended the building and then took command. The first voyage from Liverpool to Melbourne took place in 1854, departing on 14 May and arriving off Sandridge Pier on 31 July. Elapsed time was 77 days. With 1 million pounds of gold dust amongst the cargo, *Lightning* left Melbourne on 20 August and after a voyage of 64 days anchored in the Mersey on 23 October. The round trip had taken 5 months and 9 days. Although the 64 days home was a record, *Lightning* had been forced to sail easy for four days whilst a new fore-topmast was sent up and rigged. A fierce blow had accounted for the topmast and a number of sails.

Captain Forbes transferred to the *Schomburg* and Captain Anthony Enright, a tea clipper master of some repute, was appointed in command in January 1855 with the princely salary of 1,000 pounds per annum. He remained in command for four voyages (until August 1857). Like his predecessor, he drove his crew and his ship hard. He was a strict disciplinarian, trusted by his crew and very popular with the passengers. His four voyages have been well recorded in the ship's own newspaper "Lightning Gazette".

In 1857, in company with two other Black Ball liners *James Baines* and *Champion Of The Seas*, *Lightning* was taken up by the British Government and sent to Portsmouth to load troops for India. The first two mentioned vessels sailed together in August but did not make good time (101 and 103 days respectively). *Lightning* sailed at the end of the month and made a better passage of 87 days. Unfortunately Captain Enright had given up command due to his wife's ill health and had been relieved by Captain Byrne.

Regular trade continued until 31 October 1869 when disaster struck. Loading wool at Geelong, a fire broke out in the for'ad hold. Unable to control or contain the blaze, *Lightning* was allowed to drift clear of the wharf. She was completely gutted by the fire and sank at sundown.

Best passages recorded by *Lightning* during her career were:

- 1854 Captain Forbes 76 days (out) 64 days (return)
- 1855 Captain Enright 73 days (out) 86 days (return)
- 1855 Captain Enright 81 days (out) 79 days (return)
- 1856 Captain Enright 69 days (out)

Schomburg

Wooden ship built in 1854 by Hall of Aberdeen who also built the *Sobraon*. Her measurements were 288ft (oa), 45ft beam and 2,284 registered tons. Captain J N Forbes as Commodore of the line was in command. As usual, much was expected of him and his new ship but, alas, this was not to be. Departing Liverpool on 6 October 1855 she gave fair results on passage recording, at one stage 15.5 knots. Landfall was made at Cape Bridgewater (Victoria) on Christmas Day and after two days of battling headwinds the wind died away and whilst attempting to tack off the shore *Schomburg* grounded on a sandbank about 35 miles west of Cape Otway. Several attempts were made to refloat her, but with no success. She broke up on the last attempt at salvage and one part of the ship was swept away by the wind and tide. Strangely enough, this portion was later found in New Zealand waters and positively identified.

No lives were lost in the stranding, and although Forbes was cleared by the marine enquiry at Melbourne, he did not command another Black Ball vessel. His career subsequently declined and although he commanded several other vessels including *Hastings*, *Earl Of Derby* and *General Wyndham* until 1866, his reputation as a fine seaman and ship master never recovered. He died in Liverpool on 14 June 1874 and is buried near the grave of James Baines. His tombstone recalls only one of his commands, and is enscribed "To the memory of James Nicol Forbes, one time Master of the famous ship Marco Polo. And to Jane, his wife, aged thirty-three years'.

James Baines

Wooden ship built by Donald Mackay of Boston in 1854. At the time of building, she was considered to be the largest wooden ship in the world, surpassing another Mackay built and Baines owned vessel *Champion Of The Seas*. Her dimensions were 266 (oa) x 44 ¾ft, and depth of hold of 29 ft. Whilst I cannot find her mast heights, the mainyard was 100ft in length, and she was designed to carry 12,000 yards of canvas. Like *Lightning* she was modified to carry moonsails above the skysails. Under the command of Captain McDonald, *James Baines* departed Boston on 12 September 1854, arriving at Liverpool on the 25th. Fitting out of passenger accommodation was carried out after her arrival by Messrs James H Beale and brother.

Departing Liverpool on 9 December, on the maiden voyage to Australia, she had 700 passengers, 1400 tons of cargo and 350 sacks of mail on board. Her passage of 63 days was a record, and a very proud Captain McDonald wrote to his owners of the passage. Parts of his letter read:

> 'I have great pleasure in announcing the arrival of the *James Baines* in Hobson's Bay at 8pm on 12 February, making a run of 63 days 18 hours and 15 minutes from passing the Rock 'till the anchor was down in Hobson's Bay. . . . The greatest distance run in 24 hours was 423 miles, that with main skysail and stunsails set. Had I only had the ordinary run of winds I would have made the passage in 55 days.'

The return voyage, commencing on 12 March, 1855, took 69 ½ days, with a total round trip time of 133 days.

Liverpool was thrown into chaos in 1856 when *James Baines*, reputed to be the fastest ship in the world, was posted overdue. She had sailed from Melbourne on 7 August and after a good run, including 356 miles on the 9th, was beset by calms and headwinds. *Lightning* sailed from Melbourne some three weeks later, but caught up with *James Baines* on 30 October. Both ships remained in company for a week and arrived in

Liverpool on 20 November. Comparative times were 84 and 105 days.

James Baines regained her reputation in 1857 with a Melbourne to Liverpool passage of 75 days. As detailed earlier, she was taken up by the Government for service in India with two other Black Ball ships. Prior to departure for India she was inspected by Queen Victoria who expressed her surprise that such a magnificent vessel was part of the British Mercantile marine. After the trooping run, *Lightning* and *Champion Of The Seas* returned to the Australia trade, but to *James Baines* it spelled disaster. She loaded a cargo of jute, rice, linseed oil, and hides, arriving back at Liverpool in April 1858. Discharging commenced in Huskisson Dock and the tween-decks were soon cleared. On 21 April, the lower holds were opened and the next day fire broke out in the cargo. By 9.00pm, all was lost and she became a burnt out wreck. *James Baines* and her cargo were valued at 170,000 pounds.

Robin Pennock

CALLIOPE

Between the Crimean War and 1914 the Royal Navy, the most prestigious service in the world, saw very little real action. There was only one big-ship surface action in that period, the indecisive battle between the large cruiser *Shah* and the Peruvian turret iron clad, *Huascar*. After that action Rear Admiral de Horsey fell from grace, not for failing to sink the *Huascar* but for using such an unsporting weapon as a torpedo. Most of the conflict during these years was supporting colonial wars, running punitive expeditions, and anti-piracy campaigns, mainly in the Far East.

In spite of the enormous prestige of the Royal Navy, the rise of the new US and German navies created a challenge. It became a matter of morale to prove the superiority of the British fleet over their new rivals even if they had no intention of ever going to war. Every opportunity was taken. One such chance occurred at Apia in Samoa in the middle of March, 1889.

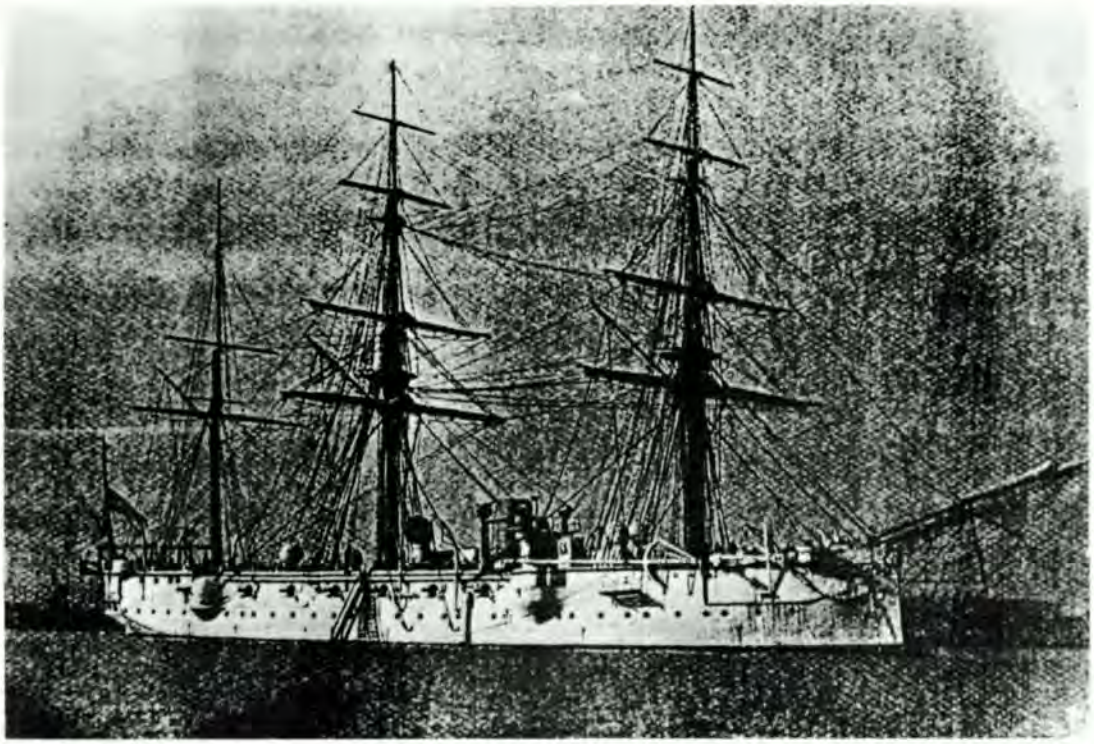
A mixed naval force of several small cruisers and gunboats — three American, three German, and the 2,770 ton British cruiser *Calliope*, — lay in the harbour. The weather had been worsening for days and a hurricane was threatening. Throughout the night of March 14/15 the wind had steadily been getting stronger, and by midday of March 15 the barometer had dropped and a gale was blowing. The ships began to drag their anchors. Some collided with each other as they were driven helplessly towards the shore. The American *Vandalia* carried away *Calliope's* jib boom, and later the German *Olga* crashed against her side, tore out her fore yard, smashed several boats and most important, snapped one of her anchor cables.

By nightfall, *Calliope's* situation was becoming desperate. She continued to drift towards the inner reefs and was dragging her one remaining anchor. The *Trenton* and the *Olga* were also threatening to collide with her again. Captain Henry Kane took the only course that remained to him. Kane called upon his engineers for full pressure in the boilers and then slowly let out his anchor cable to allow his ship to clear the stern of the *Olga*. Then he ordered full steam ahead and slipped the cable. For a while nothing seemed to happen and the stern of the ship was only twenty feet from the foaming reef. Then, slowly, she began to claw her way out of the harbour, making scarcely a knot against the storm. 'My anchors are gone, and I am going to sea,' Kane called to the US admiral Kimberly as he pulled past the *Trenton*. After hours of struggle the *Calliope* reached the open sea and relative safety.

Next morning the storm blew itself out and the *Calliope* returned to Apia where Kane found the city devastated and the fleet destroyed. The American ships *Trenton* and *Vandalia* were lost. On the *Vandalia*, the captain, four officers and ninety three men perished. The third American ship, *Nispic* was on the beach with her rudder gone. The German ships *Adler* and *Eber* were lost and the *Olga* was on the beach. Ninety six German lives were lost. A trading barque and six coastal vessels were also ashore.

The losses were quite horrifying to the world of 1880, but in Britain it was a time for rejoicing. *The Times* to the *Army and Navy Gazette* carried articles on the saving of the *Calliope*, and the implication behind it all was the superiority of the British seaman. Probably the real hero of the whole affair was the chief engineer, Henry Bourke, and he was quickly promoted.

Their Lords at the Admiralty too, were delighted. The commendation included, '. . and in



Calliope (Photograph courtesy author).

conveying to him the thanks of the Admiralty my Lords desire to express their thorough approval of his skilful seamanship and the measures taken by him throughout to secure the safety of his ship'.

The Art Union of London produced an etching by W.L. Wyllie in 1892 showing the escape of the *Calliope* and it was in much demand.

Henry Kane stayed in the Royal Navy and reached the rank of Admiral. He was known in the Fleet as 'Calliope' Kane and his death in 1917 still ranked quite an obituary notice in such colonial papers as the *Herald*. Long forgotten now, the hurricane at Apia was the big naval news of 1889.

M.A. Head

YECATS: A MODERN SMALL SHIP

Yecats was built about 18 months ago by Halvorsen in Hong Kong for successful American businessman Gary Norton. The unusual name is actually Mrs Norton's first name spelt backwards.

The vessel is 130' long, 27'6" wide, and has a draught of 8', displacing 300 tons. It has twin Caterpillar V12 diesels each capable of producing 1,200 hp, and two auxiliary 40kw 240v 60 cycle alternator sets. The hull is made of core 10 steel which is explosion-bonded to a superstructure of 5086 aluminium. The 8 sacrificial zinc blocks vary in size when new from 4" to 12" square, and after 18 months are still at least 50% intact. Any bare metal below the waterline simply turns grey, and doesn't rust. There is no positive galvanic protection system on board. There are two reverse osmosis desalinators on board with a capacity of 35 gals/hr each. These are backed up by an Australian-made Nautilus desalinator, also reverse osmosis, with a capacity of 15 gals/hr.

There are 4 deck levels: the lower deck, which has engine rooms and accommodation; the main deck which has the forward and aft salons and the galley; the upper deck which has the

Yecats (Photograph courtesy author).

wheelhouse, gymnasium, and helicopter pad; and the flybridge deck which has a remote control area and an entertainment area with barbeque and dumb waiter service shaft. Midships on the upper deck, just behind the gymnasium, there is a crane with a 5,000 lb single pulley capacity, or a 5 ton double pulley capacity. This is supported by a 36" box section direct to the keel.

Yecats has six separate dead reckoning computers on board, as well as Loran, Omega, Sat Nav, colour radar, colour sonar, colour depth sounder, a plotting computer, and a Bowditch navigator with microfische viewer. The ship is divided into 12 fire zones, which are monitored at four locations by the on-board surveillance computer system. These are in the engine room, the bridge, the captain's cabin, and the owner's stateroom.

As well as the owner's stateroom, there are four guest staterooms, each with its own marble bath and shower, and each luxuriously fitted out. There is good accommodation forward for the six crew on the lower deck. On the main deck there is an ultra-modern galley which a cordon bleu chef has described as 'the best kitchen I've ever worked in'. Included is a dumb waiter which serves the flybridge area, and the bridge. On the main deck there are two salons, forward and aft, with piano, bars, video, sound systems, and video library.

The helicopter pad is situated on the rear upper deck, and the deck was strengthened to withstand a force of 12G. The Jet Ranger III sits quite nicely there. There are 12 tie down points for the aircraft, but only six are currently being used. Tiedown is with half-inch nylon for inner reef cruising and seas up to 6' by 3S (short, sharp, and sloppy), and for ocean voyages, three eighths stainless wire. The Jet Ranger gets regular weekly inspections and hose-downs when in use. For long trips, the tail rotor and tailplane assemblies are stowed inboard, and the entire aircraft is wrapped in plastic and a specially made cover.

Full fuel load is 15,000 gals of diesel, which is filtered 5 times before final use. This gives her an effective range of about 4,000 nm at 11 knots, 15 days steaming. Maximum speed is 15 knots.

Total cost was about $4m U.S., and the estimated cost of the helicopter landing/support deck was $30–40,000 U.S.

Bruce Parr

NOBODY ASKED ME, BUT . . .

Nobody asked me but . . . it seems to me to be a pity that the level of written debate on matters maritime, from Servicemen, has been almost non-existent in recent ANI Journals. I say that it is a pity because debate tends to have a domino effect and has been known to spur ANI members onto bigger and better things — namely Journal articles.

By way of explanation I suggest that for a start, it may be that recent national political events have 'moved the goal posts' on the Service community at large. The word is that 'they' have taken the debate back to the basics, are making 'us' justify our existence and are attacking our sacred cows. The Minister, through the medium of Dibb, appears to be churning the melting pot from whence attacks at the very foundations of our existence have come. Each of the Services is under some form of attack: RAAF with ownership of (ground support) helicopters and Orion aircraft; Army with loss of tanks and traditional battalion structure; while Navy has already lost the carrier and is staving off a diminution of blue water capability.

I wonder now whether we Navy types might not be shell shocked by the assault. I see Air's FA18, Air to Air refuelling and AWACS counter-attack carrying them through their strategy. Army, perhaps equally shellshocked, have saved some of their bacon by refusing (publicly?) to support an amphibious capability. They have also embarked upon a 'helicopter grab' either consequent or subsequent to their land acquisition fiasco.

Naval types may well counter with reference to the surface combatant, the submarine and the current high PR profile. This tactic is, I maintain, shortsighted and inadequate. Such minor skirmishes won't win the battle. And the battle is, I suggest, to gain the nation's acceptance of the necessity of a coherent maritime strategy for 'Island Australia' (I'm proposing this buzz phrase to replace 'Fortress Australia' et al).

But back to the mainstream of this article, which is why the level of maritime debate is low and what we can do about it. There are two significant factors contributing to the demise of the debate. Firstly, perhaps would-be authors are too heavily committed to the demands of their jobs which require production of a plethora of paper in fighting the in-house skirmishes. Is it not asking a little too much to ask a fellow to write for relaxation as well? (Not to mention the lawns, the picnic with the kids, the weekend on the coast). Further, I suggest that some may have problems with a collation of conflicts of interest, security and, dare I say it, the disapproval of senior officers. Perhaps also, some have become so disillusioned with their lot generally, which might include perceptions (and misconceptions) of erosion of conditions of service. This group often chooses to take the easy way out — after all talk is easier.

My second contributing factor is that the RAN has a dearth of strategic thinkers. Let no one ask how many we may have, rather, how many do we need? I lay much of the blame for this on Navy's *haste towards sub-specialisation and promotion leaving little time for digestion, reflection and* eventual dissertation, which leads to the production of tacticians rather than strategists. The Journal regularly publishes a variety of articles on Naval equipment, capabilities or facilities. The few strategic articles that are published, are invariably contributions from Staff College students. In itself it is good that the students are required to produce strategy papers. But what then, post Staff College; and what of other types who have neither the bent, ability nor opportunity to progress such an undertaking.?

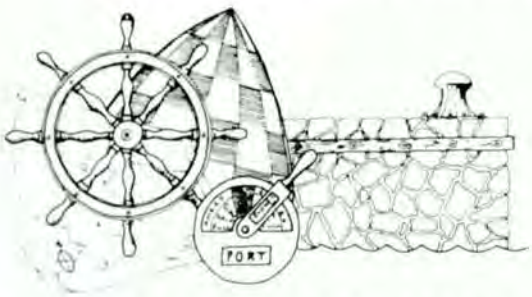
So, having criticised, now comes the solution. Firstly, in order to facilitate a genuine appreciation of the elements of maritime strategy, read an authoritative book on maritime strategy. I would suggest Geoffrey Till's 'Maritime Strategy and the Nuclear Age' (MacMillan, London 1984) which was reviewed in the February 1984 edition of the Journal. I would encourage even the lethargic to work through the book and to try to understand that 'maritime strategy' does not have to be a bogey man.

My second suggestion is the ANI encourages the shorter articles in discussion of elements of maritime strategy — perhaps as an ongoing and progressive project. Concurrently, the ANI might also actively solicit shorter articles such as this 'nobody asked me but . .'

It may just be that in so doing, the level of knowledgeable debate will improve. Eventually this may serve to win, finally, the war of words about Defence and maritime strategy in whatever forum or medium the debate may take place. After all, it is 'we' who have to convince the taxpayer that maritime is might and right — no one else will do it for us.

Ian Weekley

SHIPHANDLING CORNER



SHIP HANDLING SIMULATION WORKSHOP

Five Australians attended the inaugural KAE Ship Handling Simulator User Association Workshop held at Krupp Atlas Elektronik in Bremen over the period 18th to 20th June, 1986. One represented Krupp Aust Pty Ltd, two the Australian Maritime College, one the Department of Defence and the fifth, Lieutenant Commander Owen Kelly, the RAN. They met with representatives of the three other user authorities of the KAE Systems which are generally regarded as the world's most advanced for training and research applications in the field of Ship Handling Simulation.

Founding members of the Association are the Hamburg School of Maritime Studies, the Royal Australian Navy, the Australian Maritime College, the National Taiwan College of Maritime Science and Technology and Krupp Atlas Elektronik. The RAN's system, commissioned in April 1985, was the world's first purpose built Naval Ship Handling Simulator. A similar configuration is presently nearing completion for delivery to the West German Navy's Navigation and Training Centre at Muerwick, in November this year. On commissioning of this system, the Federal German Navy will also become a member of the User Association.

The main aims of the Association, which will operate as an independently constituted body headed by an annually elected Chairman, are mutual cooperation and the interchange of ideas and systems working practices as they affect individual member training and research objectives. Together with a regular exchange of data, it is expected that this will lead not only to increased system operational effectiveness but also to coordinated development by KAE of new files and programs on behalf of members as and when appropriate.

Among other objectives will be user development of new fields of application common to all systems as well as routine availability of mutual assistance for both general and specific operational requirements. Joint meetings involving system demonstrations and the presentation of papers are to be convened at least once a year at a mutually agreed member location. It is planned that this location will be in Australia in 1988 to coincide with Australia's Bi-Centennial Celebrations.

RAN Ship handling simulator (Photograph courtesy Command Photographic Centre).

WHAT'S ITS NAME

By Vic Jeffery, Navy Public Relations Officer, Western Australia

One can imagine my consternation when I read a report in a recent edition of the British magazine 'Ships Monthly' that it is understood that the two FFGs planned, and under costruction at the Williamstown Naval Dockyard are to be named *Australia* and *Melbourne* respectively. Surely we have not reached a situation where we would consider naming an escort type ship *HMAS Australia!* When one considers the proud ships that have carried this nation's name with pride and distinction in times of peace and war, this suggestion must surely be absolute nonsense.

There would be few arguments as to naming FFG–05, *HMAS Melbourne* — if so, the first time in our 75 years that the RAN would have had every capital city 'afloat' as commissioned warships at one time.

But then what name will be selected for FFG–06? The Ship's Names, Badges and Honours Committee has an interesting period ahead. Chaired by the Director of Naval Personal Services, the Committee includes the Naval Historian, Heraldry Advisor, and a representative of the Director of Naval Ship Design. Personnel may be co-opted to advise the Committee as required.

The Royal Navy has never revived the name 'Shropshire' since the heavy cruiser of that name was transferred to the RAN in 1943 as a replacement for *HMAS Canberra* . A proud ship, she won the Battle Honours Atlantic 1941, Arctic 1941, New Guinea 1943–44, Leyte Gulf 1944, Lingayen Gulf 1945, Pacific 1945. Should this come under consideration? If an expression of our national pride and heritage is considered appropriate we can look no further than *HMAS Anzac*. Indeed, a fitting name for a fighting ship.

Personally I have strong leanings towards the names of the most famous Australian-built and manned destroyers in our 75 year history — HMA Ships *Arunta* and *Warramunga*. Their mottos and Battle Honours speak for themselves. *Arunta* ('Conquer or Die') won the Honours Guadalcanal 1942, New Guinea 1942–44, Pacific 1943–45, Leyte Gulf 1944, and Lingayen Gulf 1945. *Warramunga* ('Hunt and Harass') won the Battle Honours, New Guinea 1943–44, Leyte 1944, Lingayen Gulf 1945, Pacific 1945, Korea 1950–52.

Another area of great consideration for the Ships' Names, Badges and Honours Committee is the names to be selected for the new

HMAS Arunta (Photograph courtesy author).

submarines. Will they carry-on the names of the six Oberon-class boats they will replace, or will they be a new breed altogether? Consideration could be given to reviving the 'V' names, Vampire, Vendetta, Voyager, Vengeance, Vigilant and for a sixth, Valour, Vantage, Viper, Victoria, or possibly Venture. It is a little known fact that after the wartime loss of the V-class destroyer *HMAS Vampire*, a Royal Navy submarine of the same name served between 1943–50. The first five names have all been carried by commissioned ships in the RAN and a sixth is open to discussion.

On the other hand will the Q-class be considered for reintroduction with the submarines? Quickmatch, Quadrant, Queenborough, Quality, Quiberon and for a sixth, Quest, Queensland or Quick?

Then again, they could be the Snake-class. Taipan, Tiger, Krait, Adder, Coral, Diamond, Dugite, Cobra, or Python. The considerations available roll on.

The wartime N-class destroyers on loan from Britain — *Napier, Nizam, Nepal, Nestor* and *Norman* served with great distinction in the Royal Australian Navy. However, I doubt whether these names would warrant serious consideration for future RAN units.

Then one looks at the replacement destroyer escort/light patrol frigate project. Conceivably up to eight more names to be selected. Possibly a carry-on of the rivers will hold sway here. If so, I believe Yarra, Warrego, and Parramatta would be certainties with Murchison, Gascoyne, Barcoo, Culgoa, Shoalhaven, Condamine, Diamantina (oh to have another 'Tina' in the Fleet), Hawkesbury, Barwon, Burdekin, Swan and Torrens coming under consideration.

If the second, and somewhat smaller replenishment ship recommended in the Dibb Report is ordered this would seem a straight choice between Supply and Sirius.

There will be no shortage of names to select from for the Bay-class minehunter catamaran project, but the names selected for the other acquisition projects will certainly be of great interest to many past and present naval personnel. Certainly a topic for prolonged discussion!

TALL SHIPS AUSTRALIA 1988

By Rear Admiral Rothesay Swan AO CBE — Director Tall Ships

Australia is an island continent with over 36,000 kilometres of coastline. Our first European settlers had to survive a hazardous journey under sail before taking on the challenge of forging a living from a harsh environment. This nation's early development and burgeoning overseas trade was dependent above all else on shipping, shipping which was primarily propelled by sail, from the days of the earliest explorers, the arrival in 1788 of the first fleet and for another hundred years. Just as our coastlines are littered with the 'bones' of shipwrecks from the days of sail so the pages of Australian history are full of the reminiscences of voyages of travellers to Australia.

When The Australian Bicentennial Authority was set up in early 1980 and consideration was given to events of a national character which would form the nucleus of the Bicentennial celebrations, it was inevitable that thoughts would turn to the sea and to ships. The proposal to hold a gathering of the world's Tall Ships was stimulated by the outstanding success of such events overseas. The first Tall Ships Race in 1956, was organised by a London solicitor and lover of sailing vessels, Mr Bernard Morgan. He envisaged a one-off event, an organised race from Torbay to Lisbon. However, its great success resulted in the staging of similar events nearly every year since.

The enthusiasm generated by the first Tall Ships gathering led to the formation in the United Kingdom of the Sail Training Association. This body has gone from strength to strength in its coordination of Tall Ships events and promotion of young people as sail trainees.

The Sail Training Association's definition of a sail training vessel is any single hulled sailing vessel not less than 9.14m (30 ft) in length with at least half its crew as trainees between the ages of 16 and 25. The term 'trainees' is further defined as 'young persons (male or female) who are being trained as future officers or ratings for entry into either the Naval or Mercantile services or young persons who are not being trained to become professional seamen, but who are being given experience in sailing vessels as part of their schooling and/or character training'. Trainees as so defined may thus be taken to be any young people within the age limits who are looking for a taste of adventure at sea provided that they do not normally spend a great deal of time offshore as amateurs. These extremely wide definitions ensure that any sturdy seagoing vessel with a crew partially made up of enthusiastic young people may participate.

Not surprisingly, there is much competition between ports to host a visit by the Tall Ships and they are constantly sought to highlight major national events. The arrival of these splendid ships accompanied by the many smaller competitors provides a carnival atmosphere with millions of visitors thronging the quays and with the international crews being feted by all. An outstanding event involving Tall Ships was that held to mark the Bicentenary of the United States of America when 17 of the larger square rigged ships sailed up the Hudson River in company with other spectacular vessels to salute the President on the 4th of July 1976. And, in 1984 Tall Ships gathered in Quebec to commemorate Jacques Cartier's voyage to Canada. In 1986 the ships will return to New York for the centenary of the recently refurbished Statue of Liberty.

The demand for the ships has made it necessary for the International group of Sail Training Associations to plan programmes for several years in advance. Australia first put forward its request for the Tall Ships in 1979. This was repeated at each annual meeting of the Association until in 1984, all members of the Sail Training Association agreed that the major event in 1988 should be reserved for Australia's Bicentennial celebrations. And so was launched 'Tall Ships Australia 1988', a gathering of the worlds' sail training vessels in Australian waters to celebrate Australia's Bicentenary.

Naturally such an exciting international event involving many ships from overseas and many

Federal Republic of Germany's naval training Barque Gorchfock.
(Photograph courtesy of The Australian Bicentennial Authority).

ports of call does not just happen. It needs careful planning and organisation to make sure that the diverse needs of so many nationalities and types of vessels are met. To manage, organise and co-ordinate 'Tall Ships Australia 1988' the Australian Bicentennial Authority appointed a Director Tall Ships. The task was seen as of truly global dimensions. Initially it entailed research into the characteristics of the various ships — their speed and sailing abilities, the time they would be able to devote to the voyage and the number of ports at which they could call. The last of these was especially mportant to ensure that as many Australians as possible would have access to them.

As well, detailed planning is required to meet the needs of each ship and its crew, from berthing arrangements and fuel supplies to a visit to the doctor and activities to ensure that the crews enjoy the hospitality that the people of Australia will lavish upon them. Naturally, to achieve all this on a limited budget, the Authority has to keep staff and expenses to the absolute minimum.

One of the many initiatives taken in the enthusiastic approach to this task has been to set up Tall Ships Planning Committees in every State. These comprise members of government, authorities, corporations and the community who are preparing to make the ships' visit to each State a success in every way.

Meanwhile, in the Tall Ships Division of the National Office of the Australian Bicentennial Authority, the overall arrangements for the event have been rapidly taking shape. The 'concept' is for a number of vessels approaching across the Indian Ocean to call at Fremantle between 8–12 December 1987, Adelaide between 22–26 December 1987 and Melbourne between 31 December 1987 — 6 January 1988 before arriving in Hobart; ships approaching across the Pacific Ocean are invited to call at Brisbane between 30 December — 2nd January 1988 or Melbourne between 31 December — 5 January 1988. Some vessels will also be invited to call at Albany (11–14 December), Port Lincoln (22–26 December) and Launceston (2–6 January).

In Hobart all the ships will be in port together on 10 January preparing to race or sail in company to Sydney departing on 14 January and arriving in Sydney on or after 19 January. In cooperation with the Sail Training Association (UK), the Royal Yacht Club of Tasmania and the Cruising Yacht Club of Australia, the Director Tall Ships is also responsible for the overall organisation of this race which will be conducted under international 'Racing and Sailing Rules' issued by the international Sail Training Association.

Cruises in company may also be arranged between Australian ports, depending on the number of vessels visiting ports and the wishes of the captains of the vessels. At every port, visitors will be able to go onboard these magnificent ships, without charge, while the trainee crews are entertained by young Australians giving them an opportunity to experience life in our country.

On arrival in Sydney, with one of the finest harbours in the world, the ships both large and small will once again be berthed together until they depart in a Grand Parade of Sail on 26 January 1988.

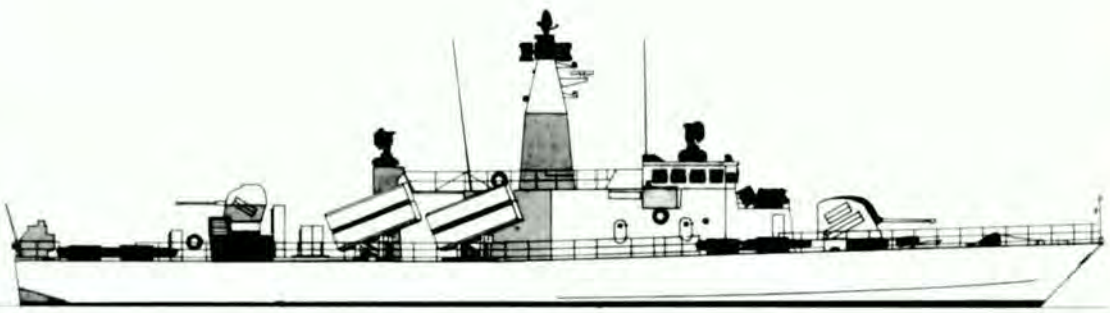
In all the ports being visited by the Tall Ships, special Bicentennial festivities are being planned to ensure that the visiting trainees and crews of all vessels, no matter how big or small they may be, can get to know young Australians and their way of life. Plans include the selection of young Australians from country and urban areas to meet and entertain our visitors and to be trainees on board Australian vessels taking part in the event.

Acceptances, in some cases not yet formally confirmed, have already been received from Brazil, the Federal Republic of Germany, Japan, New Zealand, Spain, Poland, USSR, United Kingdom, and the USA. And other countries still considering participation include Argentina, Canada, Colombia, Ecuador, Indonesia, India, Italy, Mexico, Norway, Oman, Portugal, Uruguay and Venezuela although final decisions are not expected until 1986/87. In addition, some 5 non-government Class A vessels, 10 Class B vessels and 22 Class C vessels have registered an interest in participating from both Australia and overseas. Australian vessels which have indicated an intention to take part include the *Alma Doepel, New Endeavour, STS Leeuwin, Falie, Golden Plover, Defender, Lenna, Gypsy Queen, Ocean Venturer II* and *Soliloquy*.

The sight of these magnificent ships will provide an outstanding spectacle in every port they visit, especially in Hobart and Sydney where they will all gather. The opportunity to visit the ships should not be missed, for the gathering of the world's Tall Ships in Australia is one which may not be seen again.

PHILIPS

PEAB integrated electronics system for Swedish Navy Coastal Corvettes.



The Royal Swedish Navy has recently ordered the Göteborg-class patrol corvette with an overall length of 57 m, a beam of 8 m and a displacement of about 370 tonnes.

Philips Elektronikindustrier will supply the integrated C^3 and weapon control system, consisting of subsystems for surveillance, communications, command and control, electronic warfare and weapons control.

The weapon control system onboard HMS Göteborg includes a new, dual-frequency search radar, an improved integrated air defence system developed from the well-proven 9LV 200 and with upgraded performance and a completely new, integrated electronic warfare system. The system also includes subsystems for anti-submarine warfare, surface combat and communications.

Philips Elektronikindustrier AB

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PEAB-DM 117 8601

BOOK REVIEWS

SHIPPING ARRIVALS AND DEPARTURES TASMANIA 1834–1842 AND GAZETEER 1803–1842 by Ian Hawkins Nicholson CBE. Published by Roebuck Press, 1985, 460 pages. $15.00 (from the author 27 Euree St, REID ACT, The Roebuck Society, Canberra or leading bookstores on Australian history.)

This is the second volume of a series on Tasmania shipping by Commodore I H Nicholson CBE RAN Retired, and reflects the culmination of ten years research. It follows on from the first volume on Tasmanian shipping arrivals and departures (1803–1833) and, in addition, contains a gazeteer, or geographical Index, of Tasmanian shipping for the whole period 1803–1842. The first volume was reviewed in Volume 10 number 3 of this Journal.

The first three sections of the book mirror the sections in the first Volume. Section one contains the shipping arrivals and departures in chronological order and is the largest section of the book. Each entry contains details of the vessel, the master and owner, the port of departure and destination, and remarks on the cargo and passengers where relevant. Part II indexes the ships from Part I in alphabetical order and sufficient details are provided to match the entries with those in Part I. The third section facilitates research on a person with all names listed alphabetically.

Part IV of this volume is an index of all the various ports of origin of ships and craft arriving at or departing from Tasmania ports. To take an example:

> 'Port Dalrymple. Major harbour on the North coast of VDL, into which the River Tamar flows. Disc. by Flinders and Bass in the Norfolk, 1798, & named after Alex. Dalrymple, the first Hydrographer of the RN. Initially settled in 1804. The name of Port *Dalrymple fell gradually out of use during the period* of this record in favour of Launceston. See also GEORGE TOWN, YORK TOWN, TAMAR RIVER AND LAUNCESTON.' (ships then follow).

There are many illustrations in this section of the book. Early charts, engravings, paintings, prints and sketches are reproduced. All are interesting and contribute to a book of this type.

This book will be a valuable reference to students of Tasmanian history and those genealogists researching ancestors who may have arrived in Tasmania during its first forty years of history. One can't help getting the atmosphere of how important shipping was to the early colonists and how much of a debt the nation owes these mariners for their contribution to Australia's early development.

Haydn L. Daw

US NAVAL VESSELS, 1943 Arms & Armour Press. Available in Australia through Capricon Link Australia Pty. Ltd., Unit 51C, Lincoln Street, Lane Cove NSW 2066.

Reproduced from the official publication (ONI–54 Series) first published in 1943, this book presents a comprehensive picture of the United States Navy when it was beginning to expand into the largest armada the world has seen. In 1943 the ships still retained a pre-war elegance, not yet having their symmetry altered by crowds of anti-aircraft guns.

The photography for ONI-54 was selected from a US Naval Intelligence Division collection of some 50,000 large prints. From this collection a total of 679 photographs were selected, along with 227 line drawings from trained architects who spent their war at drafting boards in the US Office of Naval Intelligence. The scrupulously accurate plans and the photographic views selected were intended to enable the user to recognise as friendly the hundreds of classes of US Navy vessels from any angle, from Iowa-class battleships to ¼ ton amphibious 'jeeps'. Each class, or ship entry, is supported by details of salient recognition features, basic data, and differences between units within a class.

Apart from presenting *US Naval Vessels, 1984* in hard cover form rather than the original post-bound paperback, the book is an excellent reproduction of the original. Retailing for $27.95, this book is excellent value for historians and model builders. Recommended.

Vic Jeffery

BLUEJACKETS AND BOXERS, Bob Nicholls, Allen and Unwin Australia, 1986, pp 164, Hardback edition, Price $19.95.

It is fortunate that the 75th anniversary of the RAN has been accompanied by the release of a number of very informative publications on Australian naval history. Bob Nicholls — a retired Lieutenant-Commander with considerable and varied naval service — has contributed one of these volumes as he recounts the first Australian military incursion into Asia, the Colonial Naval Contingent made up of sailors or 'bluejackets' to the Boxer Rebellion in China during 1900.

In the preface to his book the author states, 'I have deliberately adopted a popular rather than academic approach to the topic'. By this I understand Mr Nicholls to mean that he has limited himself to dealing with what actually happened, in effect, re-telling the story. This he does very well. In a style reminiscent of 'Ripping-Yarns' the author outlines the nature of the conflict in China and how the Imperial Government called upon the Australian colonies for support. He proceeds to explain how the naval forces were locally raised, what motivated the men to volunteer and details the condition of the colonial naval defences at the time of the Rebellion. As an almost separate incident he also accounts for the South Australian offer of its only ship, *HMCS Protector*, the only colonial naval ship to be accepted by the Empire for use in China. The story then shifts to focus on the individual colonial governments who attempted to 'out-do' each other by seeming to offer the largest and most generous assistance to the Empire. Having followed the preparations for war, Mr Nicholls does an excellent job of explaining 'what it was like' to be a bluejacket as he weaves together the personal observations of participants in the expedition.

It is here that we gain a glimpse of the character of the bluejackets and the lack of preparedness amongst their officers for active service. The author permits us to fill the shoes of the sailors as they arrive in China only to find that most of the serious fighting had ended and their function was to be primarily as policemen, restoring order in between several mopping-up operations to clear the land entirely of Boxers; Chinese who had expressed their anti-foreign sentiments in indiscriminate attacks upon Christian missionaries and later organised campaigns against the foreign legations in North China.

The story is concluded by descriptions of the contingents' activities during their employment as makeshift authorities, the use of the *Protector* as little more than a ferry and an account of their return to Australia and subsequent reunion with family and friends. The last twenty pages of the book are devoted to eight appendices which detail the composition of each naval contingent; their personnel statistics, details of their small arms and artillery and medals they were awarded: and the *Protector*; nominal crew list and technical and armament details of the ship. In sum, the author's account of what happened is comprehensive and presented in a succinct and readable form.

Insofar as no work is beyond improvement I have two broad areas of criticism. The first relates to the author's broad treatment of the subject matter. The Australian decision to become involved in the Boxer Rebellion was not a unanimous one among the colonies. As scholarship has shown there were considerably stronger arguments at the time against, rather than in favour of, participation. As Malcolm Saunders has concluded:

> 'If wholehearted colonial enthusiasm for involvement in the Sudan campaign and the Boer War had misled the British and some colonial governments the Boxer Rebellion made it clear that the Australian colonies as a whole were unwilling to involve themselves automatically in all of Britain's troubles.....'

(*Sabretache*, vol. XXIV Oct/Dec 1983, pp. 4–9. p. 9 cited.)

This leads quite naturally to the contrasts between Australian involvement in the Boer War and the simultaneous involvement in China, the formerly totally overshadowing the latter. It is unfortunate that Mr Nicholls has decided not to explore these themes or attempted to outline the broader significance of the Australian response to the Rebellion. He also chooses not to comment upon the colonies' regard for China nor how they viewed the imperialistic carve-up of that nation. Neither are we informed of any lasting effects or implications the expedition might have had. I do not believe that these omissions are justified by the imperatives of taking a 'popular approach'. Numerous works exist which the author could have consulted to explore these related areas, thereby linking the whole expenditure to predominant themes in general colonial history.

My second criticism is related to the actual methodology of history; a subject seldom studied. I would argue strongly that good history is seasoned by the value judgements of a wisely opinionated historian. To expand this contention, history takes on greater contemporary significance if it attempts to relate past events to patterns and norms of current thinking. I will cite an example from Mr Nicholls' book to illustrate my point.

The account of the contingent's time in China contains numerous fluent expressions of racist sentiment amongst both the officers and the sailors. The case of Assistant Paymaster Wynne — also a correspondent for the *Telegraph* — is a good example. When discussing the contingent's need to carry out executions of Chinese he concludes:

> 'Until you can bring yourself to regard the Chinaman as something less than human, considerably less, you are at a disadvantage.' [p.104]

And later when discussing the pitiful plight of the Chinese (without even attempting to ask how they got that way) he again concludes:

> 'Witness their shameless indecency, and picture them among your own people — ugh! it makes you shudder.' [p.104]

The author's only response is that,

> 'Wynne's reporting normally wasn't quite this bad. Assistant Paymaster Wallace usually played for safer ground, preferring straight-forward reporting.....' [p.104]

What does the author mean by 'bad'? My point is that the nature of Wynne's comments require a judgement,

or comment at least, from any author. Surely his obvious racism must have influenced the way he performed his duties? What made him feel the way he did? How much were the rest of the contingent's officers of a similar mind? I am not in any way suggesting that Mr Nicholls is 'soft' on racism but that it remains the responsibility of the historian to identify and comment upon destructive attitudes such as those revealed in the case of Assistant Paymaster Wynne.

So much in the account is distressing, if not barbarous, that it almost beckons the judgement of the historian to provide an explanation or a moral evaluation. I believe this book would have had greater impact had the author attempted to place a framework of values or morals against the events and personalities he describes.

Notwithstanding these remarks, this book is still a very good historical work and a great achievement to the author's credit. His fluency in Mandarin and familiarity with Asian life has no doubt assisted his task. Though the printers have let the author down in a few places with poor print quality, the book is full of fascinating photos which accurately portray the mood and feeling of the times. With a price of $19.95 for a hardback volume, this book is worthy of the money needed to buy it and the time required to read it.

Tom Frame

JANE'S NAVAL REVIEW, Captain John Moore RN (Ed). Available in Australia throught Thomas C. Lothian Pty. Ltd., 11 Munro Street, Port Melbourne, Victoria 3207. Recommended retail price $29.95.

Now in its fourth year of issue, *Jane's Naval Review* raises a great number of naval issues for thought and discussion. Within 176 pages, *Jane's* has managed to cram 21 excellent articles from contributors such as C-in-C US Pacific Command, Admiral W.J. Crowe, USN; A.W. Grazebrook, who needs no introduction; Admiral of the Fleet Lord Lewin; Captain J.E. Moore, editor Jane's Fighting Ships; Dr R.L. Scheina; and former Soviet GRV officer Victor Suvorov.

Contributions span all aspects of naval activity — Counterbalancing the Soviet Navy East of Suez; South East Asian Allies Pushing Hard for Readiness; Red Sea Mines a Mystery no Longer; Can the Royal Navy Carry the Trident Load?; Submarine Incursions: Sweden Fights Back; and How Good is Soviet Naval Manpower.

An Article 'Merchantmen in the Gulf Front Line' by former British Merchant Navy engineer Officer, Nigel Ling draws a somewhat fascinating series of photographs to support the text. The effect of an Exocet on the starboard side of the engine room of the *Safina al Arab* shows the clean shape of the hole created by the missile's explosion, the plates having torn along the welded seams. The ship became a constructive total loss due to the high cost of structural repairs and renewal of electronic equipment in this modern, highly automated ship.

Another fascinating photograph in this series shows the extent of the structural collapse of the tanker *Al Ahood's* stern and superstructure. The heat was so intense that normally sound structures became plastic and unable to support their own weight. The whole superstructure had settled into the hull of the ship.

Articles in this book of the standard of 'Submarine Incursions: Sweden Fights Back' which discusses the activities of Soviet submarines in Swedish waters and 'Soviet Special Forces at Work in the Baltic?" which discusses the Soviet Spetsnaz and the question of Sweden being the next Kremlin target, are essential reading.

'Jane's Naval Review' contains 224 photographs and eight maps and line drawings to support the text, the overall quality of the pictorial coverage being very good. Priced at $29.95 this book is excellent reading.

Vic Jeffery

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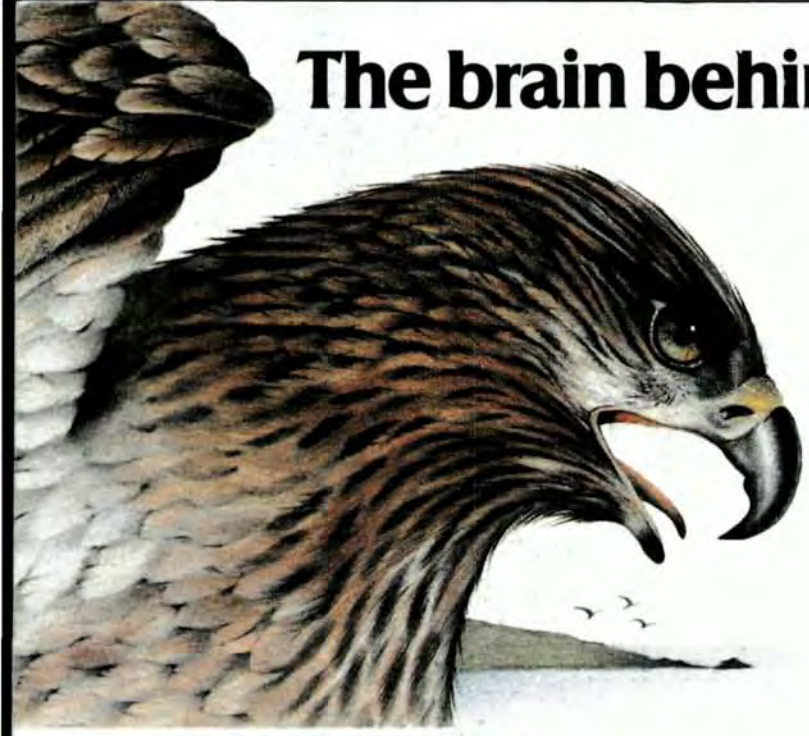

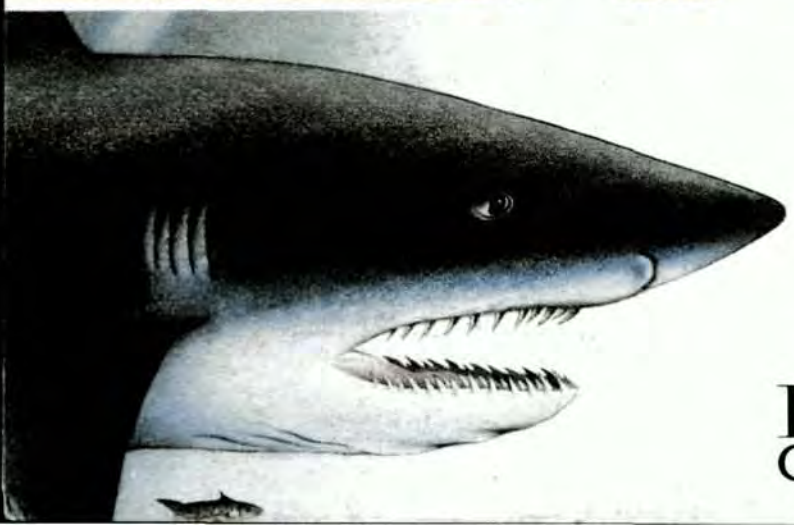

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