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JOURNAL OF THE AUSTRALIAN NAVAL INSTITUTE

AUSTRALIAN NAVAL INSTITUTE INC

The Australian Naval Institute Inc was formed and incorporated in the Australian Capital Territory in 1975. The main objects of the Institute are:

a. to encourage and promote the advancement of knowledge related to the Navy and the maritime profession,

b. to provide a forum for the exchange of ideas concerning subjects related to the Navy and the maritime profession, and

c. to publish a journal.

The Institute is self-supporting and non-profit-making. All publication of the Institute will stress that the authors of articles express their own views and opinions and that these are not necessarily those of the Department of Defence, the Chief of Naval Staff or the Institute. The aim is to encourage discussion, dissemination of information, comment and opinion and the advancement of professional knowledge concerning naval and maritime matters.

The membership of the Institute is open to:

a. Regular Members. Regular membership is open to members of the RAN or RANR and persons who having qualified for Regular membership, subsequently leave the Service.

b. Associate Members. Associate membership is open to all other persons not qualified to be Regular Members, who profess an interest in the aims of the Institute.

c. Honorary Members. Honorary membership is open to persons who have made a distinguished contribution to the Navy or the maritime profession, or by past service, to the Institute.

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Cover Photo:
SEAHAWK

FROM THE PRESIDENT

If membership fees are to be kept at reasonable levels and the quality of this Journal is to be maintained, an annual income from advertising of about $10,000 is necessary. Despite various measures taken over recent years, especially the sustained efforts of Commodore Daryl Fox RAN (Ret'd) when acting as Office Manager during 1988, this income continued to decline and a serious situation was looming.

One solution was corporate sponsorship, and your Council after consulting with an organisation specialising in such matters, has taken a decision to proceed in this direction.

The Council has invited a few select corporations thought likely to be supportive of the Institute and its aims, to join the "Friends of the Naval Institute" coterie, by making a significant financial donation. "Friends of the Naval Institute" for 1989/90 will:

- receive special invitations to hear Mr Kim Beazley deliver the Vernon Parker Oration on 6 September 1989;
- have their travel, dining and accommodation costs associated with this event met by the Institute;
- be invited to a Naval Institute Mess Dinner at HMAS HARMAN in the first half of 1990;
- be offered a half page of free advertising space in the Journal;
- be recognised in all Institute publications;
- be presented with an Institute crest and certificate announcing their status as a "Friend of the Naval Institute";
- be given the opportunity to meet serving naval personnel both senior and junior.

The financial well-being of the Institute depends upon the success of this initiative. I am pleased to announce therefore that the following 11 corporations have joined the coterie:

- Australian Defence Industries
- Avio Consultants
- Blohm and Voss
- Computer Sciences Australia
- GEC Marconi
- Pacific Dunlop Batteries
- Rockwell Ship Systems
- Scientific Management Associates
- Stanlite Electronics
- Thomson Sintra Pacific
- Westinghouse Electronic

I thank them most sincerely for their support and ask that you make their representatives feel welcome at Institute events. Their willingness to help promote an understanding of defence matters should be applauded.

I want the Institute to become more relevant to the professional needs and interests of its members and membership to be an important element of a successful naval career. With the Vernon Parker Oration, the Journal, occasional seminars, the financial assistance of the "Friends", and an involved membership, I believe this is an achievable objective.

The standard of the August 1989 Journal was very high, and I congratulate those who made this achievement possible. The Institute is now paying the authors of articles, written for the Journal and accepted for publication, $10 per 1000 words. Why not consider contributing? Your ideas are important and the reward is now financial as well as the chance to enhance your reputation.

Sincerely,

Ian Callaway

FROM THE EDITOR

You will note that this issue of the Journal has a few changes to the format. I will be attempting to keep the major articles all together with advertising and general information either side. Readers of 'New Scientist' will be familiar with this layout.

There is more detail concerning the submission of articles (see page 4), and henceforth from this issue a pro rata payment will be made for articles published in the Journal. The last issue represents, I believe, an improvement in the standard of the Journal. Whether this continues depends on **you**. The articles at pages 27, 39 and 53 are courtesy of Australian Defence Association.

My congratulations go to Lieutenant Commander Smith — the recipient of the ANI silver medallion for the best maritime strategy essay submitted during the last RANSC course. I would like to apologise to W.T. Roy for the inability to include all the map diagrams relevant to his article. This occurred because the originals submitted to me were just not good enough. For the double page map and other maps I required the assistance of AUSLIG, and Hydrographer respectively. Needless to say this accentuates the need for any submitted article to be of the standard requested at page 4.

For the sponsors who have yet to forward to me artwork for advertising please forward colour and/or B/W artwork, by 3 November 1989, to ensure a half page advertisement appears in the next Journal.

Finally, I would like to feature in a future issue of the Journal articles concerning **Information Technology** (IT) and its impact on Maritime Operations and Support. The DESINE environment should be a considered factor, inter alia, optical disk technology, EDI, local area networks — not forgetting the user who has to and must come to terms with the changing way of doing business. I would welcome any article concerning the impact on training that IT could make. Both the new submarine and ANZAC Frigate Projects reflect the impact of IT. Perhaps their Project Directors might assist.

Sincerely,

Don Agar

GUIDE FOR AUTHORS

In order to achieve the stated aims of the Institute, all readers, both members and non-members, are encouraged to submit articles for publication. The following guide outlines the major points most authors would need to know in order to publish a quality article in the Journal. A more comprehensive guide is available from the Editor.

Type of article

Articles should deal with interesting recent developments in matters relating to maritime matters which directly or indirectly impinge upon the naval profession. Overseas contributions are also encouraged. To be eligible for prizes, original articles must be accompanied by statements that they have been written expressly for the ANI. The editor reserves the right to reject or amend articles for publication. **The ANI will pay the authors of articles, specially written for the Journal and accepted for publication, $10 per 1000 words commencing from the August 1989 edition of the Journal. An annual prize of $25 for the best book review will continue. These payments will not be made to the authors of articles such as staff college prize essays and Peter Mitchell competition entries.**

Length of Articles

As a broad guide, articles should range from 2500 to 6000 words. This is between 9 and 21 pages of double spaced typing on A4 size sheets. Short articles are also welcome.

Subdividing the Article

Three major types of headings are used.

- **MAJOR HEADING** — Bold Capitals
- **Secondary Heading** — Bold Capitals and Lower Case
- Tertiary Heading — Capitals and Lower Case

Abstract

An abstract of 75 words at the most is desirable when an article is proposed. It should state the scope of the article and its main features.

The Text

The text should be in an impersonal, semi-formal manner. Consistency in spelling, headings, symbols, capitalisation etc is essential.

References

References should be numbered consecutively and listed at the end of the paper. The preferred format is:

1. Smith, R. & Jones, A., "Marketing Videotex", Journal of Marketing in Australia, Vol. 20, No. 3, June 1985, pp 36-40.

Photographs

Black and white glossy prints and colour prints are acceptable. Clearly identify photographic prints with figure number written on separate slips of paper attached with adhesive tape to the back of the prints. Captions for the photographs must be provided.

Tables, Diagrams and Graphs

Tables must be typed on separate sheets and presented so that they may be set by the printer. Use diagrams, graphs and illustrations to improve the general presentation of the article. Illustrations, etc., are referred to in the text by figure numbers, consecutively.

Copyright

Authors must complete a "Copyright Declaration" (see below) and attach this with their final typescript.

Clearance to Publish

Authors should get clearance from their employers if the articles contain sensitive information such as costs, unapproved policies, critical statements, etc. There is no objection to authors stating personal views on subjects where at variance with a corporate view, but their viewpoint must be put in perspective so that readers, including those overseas, do not gain a false impression of the status of the subject.

The Final Typescript

Articles should be typed on A4 paper. Good near letter quality (NLQ) dot-matrix print is acceptable. Three copies of the typescript should be sent to the Editor, PO Box 80, Campbell, ACT 2601. The complete package will comprise, on separate sheets:

- Cover sheet
  — Title of article — Author's name (or pseudonym) and qualifications
  — Present position — Telephone number — Address
- Recent photograph and biography of the author (less than 200 words)
- Abstract — less than 75 words
- The text
- Tables, each on a separate sheet
- Illustrations
- Photographs, clearly identified
- List of captions for tables, photographs & illustrations.

For More Information

The Editor can be contacted either via the aforementioned postal address or by phone on (062) 652020.

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1. TITLE OF PAPER .....

2. I AM WILLING, AS A CONDITION OF PUBLICATION, TO ASSIGN A NON-EXCLUSIVE LICENCE TO REPRODUCE THE ABOVE PAPER, TO THE AUSTRALIAN NAVAL INSTITUTE.

3. THE ABOVE PAPER HAS PREVIOUSLY BEEN PUBLISHED IN .....

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5. ADDRESS .....

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LETTERS TO THE EDITOR

The Editor
Journal of the Australian Naval Institute
PO Box 80
Campbell ACT 2600

Sir,

As a resident of Australia's southern state I infrequently visit Canberra and have only recently seen the National Naval Memorial. When I did examine the memorial I was considerably impressed by the symbolism of the centrepiece sculpture and by the main plaque announcing that this was the nation's tribute to naval personnel 'who have created the naval heritage of Australia'.

In a memorial sympathetically portraying the diversity of naval activity I was surprised to find that the battle honours shown pay scant attention to the First World War and therefore do not accurately reflect the historical range of RAN exploits. Action in the Dardanelles and against the *Emden* are acknowledged but years of worthwhile service between 1914 and 1918 in the Mediterranean, North Sea, Atlantic, South East Asia and Netherlands East Indies (now Indonesia) are ignored.

This general failing is difficult to understand but to ignore the RAN's exploits in German New Guinea in August and September 1914 is inexplicable. In a few short weeks the RAN was instrumental in driving the German East Asia Squadron from the south-west Pacific and preventing it from attacking shipping in Australian waters. As well, the RAN played a major part in destroying the German strategic wireless chain in the region, and escorted the Australian Naval and Military Expeditionary Force (containing RANR members) to Rabaul and New Guinea where Australian administration was established at gun point.

From a historians viewpoint this action is important because it justified the establishment of the RAN. At the first opportunity the infant navy, formed at considerable expense, was fulfilling its planned role of protecting Australian interest. The action is also historically interesting because it was the occasion of the first Australian naval personnel being killed in action and the first loss of an RAN vessel on active service (AE1). It was also the occasion of the first decorations being awarded to members of the Australian Navy — a Distinguished Service Order to Lieutenant T.A. Bond, RANR, five mentioned-in-despatches to RAN and RANR personnel (and additional mentioned-in-despatches to Royal Navy personnel then serving with the RAN).

Historical importance of an event does not necessarily mean that a battle honour should be awarded but there are excellent grounds for believing that the action around Rabaul qualifies for the award of a battle honour to those RAN units involved. According to Alfred Festberg, in his authoritative work *Heraldry in the Royal Australian Navy*, (pp.125-126), battle honours are awarded for 'successful war service' and successful operations are those which 'resulted in the more or less complete frustration of the enemy's intention at the time, although no warship may have been sunk'. By any standard, naval activities in the south-west Pacific in August and September 1914 meet those criteria.

So I remain puzzled. Why are there so few battle honours for the First World War? And why does not 'Rabaul 1914' appear among them? I cannot help but feel that, until there is adequate recognition of RAN activity during the First World War, the Naval Memorial will be a less than complete tribute to Australia's naval personnel.

Ray Jones

AUSTRALIAN FIRM BUILDS NEW SUBMARINES' BATTERIES

Pacific Dunlop are hard at work preparing for the biggest industrial battery project ever to be undertaken in Australia.

This follows the announcement late last year that a joint venture company owned equally by Australia's Pacific Dunlop and West Germany's Vara Batteries AG had been awarded the contract to supply batteries for the Royal Australian Navy's new submarines.

The $60 million contract calls for delivery of the giant batteries to the Australian Submarine Corporation between 1993 and 1998.

Each battery will take about a year to build.

The high-tech batteries will each store more energy than 10,000 car batteries.

Experience with this technology is expected to provide valuable spin-offs in other industrial battery applications including for BSPs (battery storage plants) for load levelling.

The joint venture will invest approximately $6.5 million in a new manufacturing plant in Adelaide where the ASC has its shipyard.

Planning for this facility is already under way.

Both venture partners are pre-eminent in their regions.

Varta is not only a leading battery maker in Europe but also the world.

And, according to the managing director of Pacific Dunlop, Mr Philip Brass, "Pacific Dunlop has considerable experience in building batteries for the Navy's existing Oberon class submarines, and in the United States our GNB subsidiary is the sole supplier of batteries to the US Navy's submarine fleet."

Pacific Dunlop also make fully-sealed batteries ideally suited for portable equipment such as test gear, transceivers, medical and photographic equipment used extensively by the Armed Services.

Pacific Dunlop Batteries Industrial are well experienced in building batteries to power our Navy's submarines.

ANI MEDALLION AWARD FOR BEST RANSC COURSE 21/89 MARITIME STRATEGY ESSAY

THE VALIDITY OF THE "NAVAL PRESENCE" MISSION IN SUPPORT OF AUSTRALIAN FOREIGN POLICY

by

Lieutenant Commander I.B. Smith, RAN

Navies have been used as an instrument of foreign policy since they have been in existence. This use was inevitably one of force and violence and it reached its zenith in the second half of the nineteenth century with the Royal Navy and "gunboat diplomacy". Since that time nations have moved somewhat away from the use of force in foreign relations. The use of the Navy, as an instrument, although changed, is still prominent. "Naval diplomacy" has taken over from "gunboat diplomacy" as the description of the use of navies in foreign policy. The exploitation of power and not the use of force is now the theme used.[1] This can be encapsulated in the term "naval presence".

What is "naval presence"? "Naval presence", as a mission, can cover a wide spectrum of naval activities from port visits through to those activities that are associated with "gunboat diplomacy". Naval presence has been described as "the most powerful and effective lever that can be used in the pursuit of and support of national policy".[2] However, it was also stated that navies themselves do not understand "naval presence".[3] Therefore an understanding of what is encompassed by the naval presence mission, its strengths and limitations, is needed before it can become a useful instrument in foreign policy.

The present Australian Government, in foreign policy issues, has a stated aim, to the extent that it is practicable, of seeking non-military, non-interventionist approaches.[4] This would seem to preclude the use of "naval presence" as a major element in the pursuing of Australia's foreign policy objectives.

NAVAL PRESENCE

The aim of this essay is to validate the "naval presence" mission in support of Australia's foreign policy.

"Naval presence" is essentially a peacetime naval mission and its ultimate objective is the avoidance of war, even if the objective of a particular mission is something more mundane. Its use in wartime is limited to use against non-warring parties to prevent or encourage involvement in accordance with the warring party's desire.

The types of "naval presence" missions can be classified in several ways. Commanders Arnott and Gaffney divided "naval presence" into four missions according to the level of violence.[5] Admiral Stansfield Turner, in his definition of the missions of the US Navy, divides them into preventive and reactive deployments.[6] Booth in his book "Navies and Foreign Policy" describes the missions in terms of influence and power (coercion).[7] These definitions are essentially the same and whether the use of force is contemplated or expected in the pursuit of a political objective is the crucial dividing line.[8]

Coercion Mission

Coercion missions, or missions where the use of violence is contemplated, have been historically called "gunboat diplomacy" and today's mission, in substance, is still the same. The mission is characterised by the overt demonstration of power in order to achieve a political objective. The political objective is usually a simple one of either changing the behaviour of the target or forcing him to maintain his existing behaviour. The maintenance of existing behaviour is the easier objective to achieve.

Missions of this nature are generally non-routine, hence the description of them as reactive. They are also the less numerous of the presence missions even though they are likely to attract more publicity. This publicity

is generally part of these missions as it can help to communicate the political will to use force that is an essential part of the mission.

The coercion mission of "naval presence", as an instrument of foreign policy in a situation where the use of violence is consistent with this policy, has several advantages. It is flexible, as it can be applied and withdrawn more easily and with none of the complications that land forces have. From the political side, control of the situation, as it involves the ship(s) is less complicated. All elements have communications to a central area and can respond quickly to orders involving movement.

Navies are a mobile force and therefore can move relatively quickly and, if need be, independently to a particular trouble spot. Naval forces have a greater access to their medium and to significant land areas than do ground and air forces. Ships have an ability to loiter in a required area and are self-supporting over a period of time.

It must not be forgotten however, that ships do have some limitations in these instances. Situations could easily develop too quickly for the effective deployment of ships. The results of their missions are unpredictable as, short of violence, the effect can only be indirect, through the perception of the target. They can also invite trouble such as inciting hostility and provoking countervailing forces which escalates the situation and reduces the effectiveness.[9]

One essential part of the coercion mission is the political will to use violence if it is required. Also the force must be able to inflict severe damage, disproportionate to any damage the force would receive. Despite all its advantages, if the target of the mission perceives that violence will not be used or that the resultant damage would be acceptable or at least equal to damage the target could inflict, then the mission, no matter how impressive, will not be credible and can be ignored. The ability and willingness to use violence must be transmitted to the target. If this is not done, but force is still used, the initial objective of the mission can be considered to have failed.

The successful communication of political will can have a bearing on the forces required to fulfil a coercion mission. If the target believes that further force will be deployed to reinforce the initial force should violence be offered on his part, then the initial force can be a minor one. The deployment of one ship itself may signal a political will to use force to enforce a position. An example of this was the deployment of a RN warship to the British Central American colony of Belize in response to a massing of Guatemalan troops on the border. Whilst it would have had little impact had the Guatemalan troops invaded, it did demonstrate that the British Government was committed to the colony's defence.[10]

Influence Missions

Influence missions, the more numerous of "naval presence" missions, do not contemplate violence nor even desire to create the impression that they do. The impression they desire to create on the government and public opinion of the host country is one of power, smartness or friendliness.[11]

These missions are inevitably carefully planned, both in details and also in the impression they desire to create. This is why the description "preventative" can be used. The only influence mission that could be described as reactive would be disaster relief operations.

Port visits, both operational and specific purpose, are the most obvious examples of the influence mission, however there are several others. Routine combined exercises with other forces is another example. There are some activities which at first glance would not be considered as "naval presence" but as their objectives are the same as for the presence mission and they use naval assets, they could be included. Defence co-operation activity is essentially a "naval presence" mission even though warships are not involved. It uses a naval asset (personnel) in an activity that is intended to produce an impression of friendliness to both the government and public opinion of the host country. Even the hosting of visits of foreign dignitaries to warships or establishments in the host country could be considered as missions to convey impressions of power and friendliness.

Port visits are however, the most numerous example of the influence mission. Whilst the primary objective of an operational port visit is reprovisioning and rest and recreation, it still has a role as an influence mission. The mission will naturally create an impression, hopefully good, on the host country and this is why it is included as an influence mission. In that it is not a deliberate attempt at influence, there would be no expected results from an operational visit apart from augmenting existing favourable impressions.

The specific goodwill visit is different in that the visit has a defined non-military objective. It is programmed for political reasons and the crew is expected to work at creating the intended impression. The intended impression could be to link the country's own policy with some event, policy or circumstance associate with the host state.[12] This could be in an

attempt to increase trade or simply increase the visitors profile in the host country. Using ships in minor civil aid projects would satisfy the last item, especially in minor ports in developing countries.

One difficulty with the influence mission is measuring its effectiveness. Superficially the effectiveness could be gauged by public reaction but whether this results in a permanent positive effect could only really be measured in time when the favourable position needs to be exploited. Also, there is little correlation between effort and effect as the responsiveness of the host nation, which is hard to quantify before a visit, is a vital ingredient in the formula of success.

AUSTRALIAN FOREIGN POLICY

It is beneficial to look at Australian Foreign Policy by itself before introducing the "naval presence" mission to it. As emphasised by the then Minister for Foreign Affairs, Mr Hayden,[13] Australia does not seek an interventionist role nor does she see herself as having a policeman's role in our region. Clearly from this, influence not power or coercion is the tack that Australia's foreign relations follows.

Australia's objectives in her foreign affairs were summarised by Mr David Sadlier, Deputy Secretary of the Department of Foreign Affairs as: ensuring political and strategic security; advancing our economic welfare; maintaining international order; improving world standards; controlling entry of people and goods: and protecting Australians overseas.[14] Recently the present Minister for Foreign Affairs and Trade detailed the four highest priorities in foreign affairs and trade policy. These are: maintaining a positive security and strategic environment in the region; pursuing trade, investment and economic co-operation; contributing to global security; and contributing to the cause of good international citizenship.[15]

The "naval presence" mission has a role to play in some, but not all, of these objectives and priorities. The linking of foreign affairs and trade, a logical step in today's international climate, has not reduced this role but may have reduced its relative importance.

NAVAL PRESENCE AND AUSTRALIA'S FOREIGN POLICY

It is obvious from Australia's Foreign Policy objectives and priorities that only the influence mission of "naval presence" is applicable in Australia's case and therefore valid. It would be an exceptional circumstance in which Australia would need to use a show of force that is consistent with our foreign policy posture. The defence of our offshore territories, such as Cocos (Keeling) Islands, is possibly the only scenario where a show of force and its possible use could be contemplated.

Our commitment to global security is evident by our relationships with the United States. One manifestation of this relationship is the participation of RAN ship's in USN exercises. This is a sign of our commitment to this goal and is an example of "naval presence" in support of foreign policy. This example is however hard to define either as coercion or influence due to the different perceptions of the "naval presence" by the US and Australia. It should be considered as an influence mission due to the lack of intent of violence on Australia's side.

The influence mission has a significant role to play in the first priority, that of maintaining a positive security and strategic environment in the region. Port visits, routine exercises and Defence Co-operation Programmes (DCP) all play a part. DCP activities assist regional forces in the development of their ability to perform their own security tasks, as do routine exercisess. Port visits and deployments display a desire to contribute to the security of the region and an assurance of support to the national governments. They also contribute to a positive awareness of Australia in the region.

An indirect benefit of the higher awareness of Australia due to port visits is the opportunity for increased trade. This should not be considered the prime aim of these visits nor can too much success, in the trade field, be attributed to them.

EXPERIENCE OF "NAVAL PRESENCE" IN THE SOUTH WEST PACIFIC

A review of Australia's experience of "naval presence" in the SW Pacific emphasises the above role in foreign policy. During the past two years, there has been an increased involvement of the RAN in the SW Pacific with deployments and DCP representations associated with the Pacific Patrol Boat. To increase the awareness of Australia, visits to the nations of the region have followed a pattern of a port visit to the capital followed by one, with a heavy civil aid emphasis, to an outlying area. These missions have increased the awareness of Australia in the region and are successful applications of the influence mission of "naval presence".

Australia's experience during the Fiji crisis shows that Australia is not equipped for the coercion role nor, after review, was it consistent with our Foreign Policy posture. Whilst one of the objectives of foreign policy was the protection of Australians abroad, this can only

really be achieved successfully, and without bloodshed, if there is no hostile intervention by local forces.[16] This emphasises that the coercion role of "naval presence" does not support Australia's Foreign Policy.

CONCLUSIONS

"Naval presence" as a mission in support of foreign policy is alive and well. It has expanded beyond its original manifestation, "gunboat diplomacy", to cover a range of activities. The purpose of the mission is however still the same. This is where, by the use of influence of power, one country tries to get another country to pursue a desired course.

"Naval presence" missions may be divided into two groups: those which intend to use force and those which do not. The coercion mission contemplates the use of violence to achieve its aim. This threat of violence must be transmitted to the recipient country and therefore the country applying the force must have the political will to use this force. Also the scale of violence must be such that the recipient country would find it unacceptable. Without these elements, a coercion mission will fail.

The influence mission is a more subtle mission, and is more acceptable in today's international relations regime. Its purpose is to create a favourable impression on the host country. This impression is then used to the advantage of the originating country. Port visits, routine combined exercises and defence co-operation activities all fall into this category.

Australia has a non-interventionist foreign policy but it could not be described as isolationist. Therefore the influence mission of "naval presence" can be used as a instrument consistent with Australia's Foreign Policy. The coercion mission is not consistent with Australia's aims.

Port visits in our region, routine exercise with regional navies and Defence Co-operation Programmes with these countries are all activities that the RAN can pursue in support of Australia's Foreign Policy. The use of the RAN in a coercion mission can only be considered a remote possibility and, if required, its scope would be limited. Experience in the SW Pacific, over the last two years, has validated the above mission profile.

NOTES AND ACKNOWLEDGEMENTS

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THE AUTHOR

LCDR Smith joined the RAN in 1974 and completed a Bachelor of Engineering Degree (Mechanical) at the University of New South Wales. He has served in HMA Ships VAMPIRE, MELBOURNE, STALWART, PERTH and CANBERRA and has served overseas in the United Kingdom during 1980. He was posted to Department of Defence, Anzac Ship Project as the Facilities Manager on completion of his RAN Staff Course.

WASHINGTON NOTES

by

Tom Friedman

THE WASHINGTON MORALITY PLAY — Part II

In our last exciting instalment of *"Washington Notes"*, we saw how wine, women, and questionable business connections helped kill the nomination of former senator John G. Tower to be Secretary of Defense. This burst of moral rectitude on the part of the Senate was not a unique event. In fact, it coincided with several investigations of questionable actions by members of Congress.

Speaker of the House of Representatives Jim Wright (Democrat-Texas) was forced to resign after a year-long investigation of many of his and his wife's business transactions. Wright, the highest ranking elected member of the Democratic Party in the United States and second in line to the presidency, did not leave the speakership or the House quietly. To the end, he protested his innocence and that of his wife.

Wright's protestations came to naught, as sometimes happens in politics, because his support in the House of Representatives evaporated after the House Ethics Committee released the evidence it had used in drawing up charges against the Speaker. One member was reported to have read the documentation during a plane trip from Washington to his constituency in California and shifted from a vocal Wright supporter to a firm opponent.

The protracted blood letting over Wright was in direct contrast to the swift (and merciful) resignation of Congressman Tony Coelho (Democrat-California). As Majority Whip in the House of Representatives, Coelho was the number three man in the Democratic Party's hierarchy. Coelho, who is credited with being one of the Democrat's most effective fundraisers, fell under the watchful eye of the Ethics Committee when it was revealed that he acquired a "junk" bond on credit with the help of a friend in the savings and loan industry, an industry that has collapsed and is in the process of being saved by the infusions of tens of billions of taxpayer dollars.

Coelho, in announcing his resignation as whip and as a Member of Congress, said that he wanted to spare the nation, the House, the Party, and his family the agony of another long ethics probe. The resignation of the popular (and highly partisan) Coelho was well received in the country and in the Congress, where even Republicans made note of his dignified retreat. Indeed, the contrast between Coelho's actions and those of Wright reflected poorly on the Speaker and is credited with helping turn sentiment in the House against Wright.

While the Democrats were reeling from these dual blows to their prestige, the Republican National Committee (RNC), on the day that Thomas Foley (Democrat-Washington) was elected as the new Speaker of the House, released a memo declaring that Foley was coming "out of the liberal closet," a slur meant to imply that he was homosexual. At one time, such an implication would not have been dignified by a response. But the quality of civic life in the United States in 1989 has so degenerated that Foley was eventually forced to issue a denial.

But by this time there was the distinct feeling around the city that things had gone too far. The RNC director of communications was forced to resign after his memo was denounced on both sides of the aisle in both chambers of Congress. But the axe was not swung until two days after the memo surfaced and then only after the storm threatened to engulf the President. As it was, only the direct intervention of President Bush saved the job of RNC Chairman Lee Atwater. Atwater denied any knowledge of the memo, a fact that most people in Washington found hard to believe. But the President, who owed his election in part to Atwater's questionable campaign

methods, said that he accepted the denial and Atwater remained.

While passions have cooled somewhat on the Hill, many Democrats are waiting to see how the Ethics Committee handles allegations that Minority Whip Newt Gingrich (Republican-Georgia), chief accuser of Jim Wright, engaged in improper conduct in regard to a book publishing deal in a transaction analogous to that which helped bring Wright down.

Ethics problems in government are never easy to handle and have become even more troublesome due to the highly charged political atmosphere. Both Houses of Congress are reviewing their ethics codes. Members will be held to a stricter standard of responsibility in dealing with outsiders. The taking of honoraria, which has been restricted in recent years, will undoubtedly be abolished and congressional salaries will be raised over an extended period. Ethics rules themselves will almost certainly be made less ambiguous and the procedures of the ethics committees will be redrafted to give members more protection in order to help prevent "trials" in the press. In the executive branch, the President has set strict ethical standards for his senior appointees. Even such eminent personages as the Secretary of the Treasury and the counsel to the President disposed of certain stocks so as not to create potential conflicts of interest.

But reform creates its own set of problems. As of the date of this writing (July, 1989), over 200 sub-cabinet and senior executive positions in the administration remain to be filled. While the Bush administration appears to be somewhat slower than its predecessors in filling positions, the main cause for the delay is the time taken for the unusually extensive background searches that are being conducted by the Federal Bureau of Investigation (FBI) on every designee.

Another crucial problem facing the President and the Congress is fiscal: how to adequately compensate men and women who leave private industry to enter government service and how to protect Federal employees and the government when employees leave government service.

A case in point is the position of Under Secretary of Defense for acquisition, a relatively new position that was created to help clean up the procurement mess at the Pentagon. The "ideal" person for the post of "weapon-procurement czar" would have extensive experience in the defense industry and would undoubtedly have an income of at least six figures with stock options and tremendous fringe benefits. So far, over 20 people have refused to take the job. Reportedly, those have been willing to take a pay cut of tens of thousands of dollars to become under secretary have been unwilling to comply with the statutory provision that permanently prohibits the Under Secretary for Defense for acquisition from entering any sector of the defense industry after leaving his government post!

This regulation totally prohibiting re-entry into the private sector in Defense is among the most draconian that exists in the Federal government where the normal rule generally excludes a former government employee from contacting anyone in his department, agency, or office for business purposes for a year after leaving government services. But many reformers want to apply more stringent two year, five year, and permanent prohibitions to more positions. Although the President has proposed a pay increase of 25% for senior Federal employees, highly capable men and women who would otherwise be brought into the government from the private sector to make use of their experience do not want to find themselves without a job at the whim of a superior or the voters and unable to re-enter their chosen field. Who can blame them? Recent experience in the House of Representatives has reinforced their caution.

In less than two weeks, the totally unexpected resignations of Democratic members Wright and Coelho and the death of Representative Claude Pepper (Democrat-Florida) put some 75 experienced congressional staff members on the street looking for jobs just at the time when the new Congress was just finishing staffing-up and the political facts of life foreclosed hope of finding a position in the Republican Bush administration.

Obviously, the private sector is the only place for them to go. As with anyone, a government employee's most saleable asset is his work experience. Many government employees throughout the country are hired to help their employer through the maze of government regulations that apply to their business. The ability of a former government employee working in the private sector to deal with former colleagues still in government service, particularly in Washington, is an additional benefit the employee brings to his new employer.

The scandals of 1989 (which include the misappropriation of billions of dollars from the Department of Housing and Urban Development) have greatly effected Federal bureaucracy which, if sometimes infuriatingly slow and obstinate, is overwhelmingly loyal and honest. But morale among Federal employees in Washington, and even among Members of Congress, is as low, if not lower, than it has

been in living memory. They worry about making ends meet now and what will happen to them when they leave their government jobs or their jobs leave them. What they and the country need are decent incomes while working for the government, a clear set of ethics rules to guide them while they are in government service, and the right to use the expertise they gain while in government service for their employers in the private sector after a reasonable "cooling off" period. And the sooner the better.

The destroyer escort HMAS STUART arriving in the Port of Fremantle on November 4, 1988 as the third destroyer escort to be home-ported at the HMAS Stirling fleet support facility in Western Australia.

Photo: ABPH K. Bristow, RAN

NAVAL WAR HERO DIES

by

Alan Zammit

Captain J.M. Armstrong, CBE, DSO and US Navy Cross

died peacefully on December 30, 1988 at Jersey in the Channel Islands. He was 88 and had been in failing health during the past eight years.

In January 1945 as Commanding Officer of HMAS *AUSTRALIA* at the landings at Lingayen Gulf, Luzon, in the Philippines, he gained a reputation for coolness and bravery when his ship suffered five Kamikaze hits but finished her bombardment schedule.

He was to be the first Commanding Officer of the RAN's first true aircraft carrier, to be the Light Fleet Carrier "*OCEAN*".

In May 1945 HMAS *AUSTRALIA* under the command of Captain Armstrong sailed for England with the ship's company for the new carrier. However, before Captain Armstrong arrived in England the War Cabinet postponed the plan for the RAN to operate a wartime aircraft carrier.

Captain Armstrong left England for the Pacific to take command of the Escort Carrier HMS *RULER* followed by HMS *VINDEX*. This was for Captain Armstrong to gain experience in carriers as it was planned he would be appointed Commanding Officer of the RAN's first postwar carrier.

Other highlights of his career were being appointed Chief Cadet-Captain at the RANC in 1917 serving in the Battle Cruiser HMAS *AUSTRALIA* in 1918 and being Gunnery Officer in the HMAS *AUSTRALIA* in 1930. In 1939 he was appointed Executive Officer of HMAS *AUSTRALIA* and in 1940 took part in the daring rescue of nine airmen from the crew of a Sunderland Flying Boat forced down in an Atlantic gale.

During 1942 he commanded HMAS *MANOORA* and later HMAS *WESTRALIA*. For a year he was NOIC New Guinea. In 1945 the Premier of New South Wales took passage from New York to England in HMAS *AUSTRALIA* and was so impressed with Captain Armstrong he wanted to appoint him as Governor of New South Wales after Lord Wakehurst's term expired in 1946.

Lord Cranborne and later Lord Addison of the Dominion Office in London wanted to appoint a United Kingdom born person and ruled Captain Armstrong out on account of his lack of seniority in the service. The only Australian acceptable to the Dominion Office was Lieutenant General Northcott whose appointment was announced in April 1946 after a bitter exchange between Mr McKell and the Dominion Office.

In 1946 Naval Medical Officers classified Captain Armstrong unfit for sea service and this ended his chance of becoming an Admiral. During the postwar years he held important Naval appointments in Australia including 2nd Naval Member with the rank of Commodore and overseas posts in London and Washington.

For outstanding zeal and devotion to duty he was mentioned in Dispatches while serving in HMAS *AUSTRALIA* in 1941 as Executive Officer. Four years later while in command of HMAS *AUSTRALIA* he was awarded the DSO for gallantry, skill and devotion to duty at

Lingayen Gulf. The United States of America awarded him the Navy Cross for distinguishing himself conspicuously by gallantry and intrepidity in action during the capture of Lingayen Gulf in 1945.

Although his ship was heavily hit suffering heavy casualties and the disablement of a large portion of her anti-aircraft guns and radar system, Captain Armstrong maintained his assigned station and the *AUSTRALIA* carried out her bombardment missions.

Captain Armstrong is survived by his wife Philippa and David, Philip and Suzanne.

His son David joined the Navy as an Ordinary Seaman and served in HMAS *ARUNTA* in 1945. O.D. Armstrong is now Professor David Armstrong, B.A., B.Phil., Oxon, Ph.D., F.A.H.A. Challis Professor, University of Sydney.

AB Bob Haskell, the HMAS *AUSTRALIA*'s oldest AB with over 30 years service, was very proud his son was a RANR Lieutenant in HMAS *KIAMA* while the Captain's son was an OD. Captain Armstrong was the type of Naval Officer who would have liked that.

ACKNOWLEDGEMENTS

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BOOK REVIEWS

FLIGHTS OF PASSAGE REFLECTIONS OF A WWII AVIATOR

by Samuel Hynes

Reviewed by Commander Warren Milfull, RAN

Samuel Hynes is Woodrow Wilson Professor of Literature at Princeton University and is the author of several books on the Edwardian era. His current employment is a far cry from the quiet, innocent, young, man from Minneapolis who answered the call to war in 1943 by joining the US Marines and becoming a divebomber pilot.

The *Flights of Passage* takes the reader for a breeze through his basic training and operational activities in the Pacific war ending with the celebratins of V-J day at Okinawa and his subsequent demobilisation. The book reflect on the shock of the initial training, the exhilaration of flying training (and its inherent dangers) and the frequent periods of boredom experienced by these highly trained and motivated young turks when no flying was possible. His training at Pensacola and Mirimar may bring back some memories for some of our older Fleet Air Arm pilots while his accounts of his social experiences (and loss of innocence), in a very heterogeneous group of young men in the prime of their manhood, may also spur some cheerful recollections of past endeavours.

The sadness of friends lost in training and on operations together with the limited chances to utilise the highly developed skills late in the war brings out the frustrations in the pilots who cure their ills through not-so-careful indulgence in alcohol and dreams of the opposite sex. One intriguing comment was that the best jeep to steal for a run-ashore was that of the chaplain because it did not cause

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KAMIKAZE!

By Alan Zammit

TO HMAS AUSTRALIA

"Your gallant conduct has been an inspiration for all of us."
Admiral Oldendorf, United States Navy. January 9, 1945.

During General MacArthur's triumphant invasion and return to Luzon in the Philippines, ***Australia*** was Flagship of the then Commodore H.B. (Fearless Frank) Farncomb, DSO, MVO, RAN and commanded by Captain J.M. (Blackjack) Armstrong, RAN.

The "Aussie" (with HMA ships ***Shropshire, Arunta*** and ***Warramunga***) formed part of a task group known as Bombardment and Fire Support Group, assigned the preliminary bombardment of Lingayen Gulf 100. Previously on October 21, 1944, the ***Australia*** had suffered casualties at Leyte Gulf when a Japanese Kamikaze hit the foremast and exploded, killing 30 men including her Skipper, Captain E.F.V. Dechaineaux, DSC, RAN.

Off Luzon, the first ship lost near the "Aussie" was the US Escort Carrier, Ommaney Bay. On January 4, 1945, a Japanese "Judy" navy dive bomber went into a dive and crashed onto the carrier's flight deck. A fire became out of control and the ship was abandoned and sunk.

On January 5, between 50 and 60 Japanese aircraft made runs on the task group. Seven ships were hit, two of which were Australian; ***HMAS Arunta*** was the first, when a Zero was shot down and hit the water a matter of feet from the destroyer. The bomb the Kamikaze carried exploded, damaging the ship and killing two of ***Arunta's*** crew. At much the same time six Kamikaze the Aussie's crew nicknamed "Zombies" came in weaving low and fast, despite intense anti-aircraft fire from 4-inch guns and 8-inch guns as well as the Bofors and Pom Poms (nicknamed Chicago Pianos).

The combined noise from this defensive barrage was deafening — the big guns were obscured by cordite smoke and flame. The sky peppered with blotches of smoke from bursting anti-aircraft shells. The gun crews and ammunition parties sweated in their battledress.

One aircraft went on to score a hit on the escort carrier, ***Manila Bay***, the other, a Zeke carrying a bomb, came down in a vertical dive and hit ***Australia*** on the port side of the upper deck amidships after knocking the top off the second funnel and crashing on the P2 4-inch gun crew. 25 men killed — 30 wounded.

Captain Armstrong gained a reputation for coolness and bravery here.

"As he stood on the for'd end of the exposed open bridge the Skipper didn't turn a hair," recalled the Navigator.

At dawn on January 6 the Task Group entered Lingayen Gulf, a Kamikaze paradise. A number of ships were hit. The battleship USS New Mexico was hit twice.

Able Seaman John Clarke, who was on the starboard Pom Pom, described how a Val Dive Bomber was almost obliterated by shells pouring out at 1,000 a minute; then about 50 yards from the ship, his port wing fell off, followed by a terrible rending crash as the Kamikaze hit the upper deck. 14 killed and 26 wounded.

Shiny Boots

The Japanese aircraft carried a British naval shell captured at Singapore.

Between alerts, gun crews talked, read and played cards. "One gun-layer usually polished his boots," CPO Wal Sampson wrote in 'Spin Me a Dit!' by Iris Nesdale. After the fires had been put out and the wounded taken below, there were two shiny boots, still remaining.

The hits sustained on January 5 and 6 had wiped out a number of the trained 4-inch gun crews and the air-defences were mainly manned by scratch crews.

At dawn on January 8, the force returned to the Gulf and resumed bombardment of Japanese positions.

The ***Australia's*** 8-inch guns had a maximum range of 24 kilometres while the American battleships could fire their 16-inchd shells each weighing over a ton, 48 kilometres, devastating their targets. At 7.20 am that day a Dinah hit the water 20 yards from the cruiser and skidded into the ship's side doing little damage. Part of the aircraft's engine made a hole 3 feet square in the Captain's day cabin. The gun crews were drenched with petrol. A second Dinah hit on the waterline.

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NO WAR FOR TEN YEARS

by

M.A. Head

At a time when questions of morale and resignation rates from the armed services are being raised, Air Marshal Ray Funnel was quoted in the press as saying he did not believe that Australia would be involved in a war for ten years and that good intelligence would provide time for preparations to be made and extra crews to be trained. (*Australian* May 4 1989) The Air Marshal might well believe this and hopefully he is right, but at a time like this, how could he say it? It could easily be interpreted by members of the armed services that their efforts to do a good job at present are largely wasted, and further interpreted by the treasury that defence expenditure can be cut as it won't be needed for the next ten years anyway.

However, the Air Marshal has made three assumptions which must be examined if his scenario about the future is correct. First that it is possible to see ten years ahead in detecting possible threats. Second that intelligence agencies will correctly interpret their information. And third, the assumption that the government will act effectively and wisely when the intelligence agencies warn them of the possible threat. Unfortunately recent history indicates that it is not possible to rely upon any of these assumptions.

About ten years ago Lieutenant Commander I.M. Speedy wrote in this journal a study on the political and military warning times available to the defending nation in a number of conflicts between 1939 and 1971.[1] For the international conflicts from Korea to Pakistan in 1971, Lieutenant Commander Speedy estimated that the average possible perception time was 6.6 months, and the military warning time averaged to 4.0 months. This gives a total warning time of 10.6 months. The shortest warning time, the US involvement in Korea was about three days. Australia may be different, but in the light of past history, ten years may be just wishful thinking.

Second, can the intelligence community be relied upon to give suitable and timely warning. The answer is usually no. Sometimes the intelligence agencies do pull off a great coup, but there are far more examples where the obvious has been missed. The classic cases of 1941 when "The Fast East Combined Intelligence Bureau" reported, "The consensus of opinion is that war in the Far East is unlikely at present". This was taken as an article of faith so that on December 5th 1941 when 3 Japanese divisions, over 60,000 troops were reported forming up at To Kat, eight miles from Hong Kong, the report went out: "Visible Japanese preparations are more likely part of a general tightening up to concert pitch, rather than the final touches before plunging off the deep end".[2] Sadly there were wrong.

A more recent example has been the British in the Falkland Islands. The islands had been a source of constant friction between Britain and Argentina for decades and since World War II there had been a series of incidents. Intelligence reports flowed into Britain concerning the Argentinian preparations. But no one wanted to know. The Admiralty was looking at the third battle of the Atlantic, the economists were intent on taking more from the defence budget, politicians wanted to avoid the charge of sounding bellicose and diplomats thought that Argentina would be satisfied with words and would just go away. To face the problem would be inconvenient, never impossible, but just inconvenient.[3]

Third, will governments act effectively and responsibly when a threat is reported to them. Sometimes they do. More often they don't, or they leave it too late. During 1940, the Norwegian government received plenty of intelligence that a German invasion was likely. They did nothing for fear of upsetting the Germans. Later German soldiers on the way to invade Norway were captured and still the Government did nothing. Then when German cruisers appeared in Oslo fiord they sent out the mobilisation orders, by mail.

Israel was swamped with intelligence on the Egyptian intentions at the time of the Yom Kippur war, but chose for various reasons to ignore it. Israel paid a big price for that mistake and was indeed fortunate to survive.

Air Marshal Funnell has more faith in his assumptions than I do, as history seems to teach that you can usually rely on them failing you at the critical moment.

PREPARATIONS

Air Marshal Funnell has confidence that the RAAF could meet all the demands placed upon it by the defence priorities that Australia be able to meet small scale incursions.

I am sure they can. And it is true that you have to start somewhere in your defence preparations. You have to have some plan. Still flexibility should be the hallmark of it. But I have two problems with preparations to meet a particular threat.

First, if you were attacking a foe, the first thing you would do is analyse his strength and attack somewhere else and in a different manner. If Australia is well prepared to meet small scale incursions, then a future attacker would be wise to try something different. For example the opening moves of the Pacific War and the needs of the British in the Falklands War. Second, William Jackson in a recent futuristic study on a Third World War, argued that "The Unexpected always happens".[4] It seems to have in the past, it is probably a fair bet that it will in the future.

THE JOINT COMMITTEE REPORT

The same article in the Australian also reports that The Joint Parliamentary Committee on Foreign Affairs, Defence and Trade, found about 19 reasons for the high resignation rate from the Services. The fact that they found so many reasons would indicate that little will ultimately be done to solve the problems. However, three of four of the reasons seem to outweigh the others. First the service person must have a high sense of the value of the work that he or she is doing. The armed forces must be seen to be important. Second, they must get value for money for their efforts. Third, is the area of family concerns. If their family starts to suffer then the average service personnel will leave. Finally there must be adequate career structures which allow the service member to, for at least part of the time, do the jobs they joined for. Tackling these problems against the background of tightening financial restrictions will not be easy and will call for radical solutions. I sometimes wonder if the administrators of the armed services have the political will to introduce the follow through, radical solutions.

IMPROBABLE SOLUTIONS

If the above statements are more or less true, then three things follow. First, wars are fought pretty much on the come as you are basis. You will have no time for radical re-equipment or training programmes. Second, force structures should maximise depth as well as quality, in both equipment and personnel. Third, administrators should insure the maximum amount of "teeth" for the dollar.

Here are a few improbable solutions. Experts will be able to say why they cannot work, but who is making the radical suggestions needed to reform our force structures.

Nexus

It seems that the Australian forces are over officered. One possible way of reducing this is to break the nexus between military rank and public service rank. There seems no good reasons why military service personnel serving on committees in Canberra have to be of a certain rank, just so they can serve opposite a public servant of a particular rank. Military personnel should receive their rank from their place in the military force structure, not from the particular committee, board, or acquisition programme they serve in.

In 1988 there were 151 starred officers serving in Canberra, and 322 colonel equivalents. Considering the small size of our armed services, this seems a little large.[5] After all, Libya can be mismanaged by one simple Colonel.

Perhaps pay and conditions can be more related to length of service and qualifications, rather than just simply rank.

STRUCTURES

Perhaps we could look again at the defence force structures. The army consists of a regular fighting force, a core force around which mobilisation will take place, and an army reserve. Can this be radically altered if wars are fought on a come as you are basis?

At present the regular army could deploy nothing larger than a brigade for a short period of time. Therefore do we need to have regular divisional command structures? The answer, no! Then abolish them.

What would an army look like if it considered of one mechanised brigade with full support, armour, artillery, engineers etc., and two reduced infantry brigades. The brigades were permanently based in Townsville, Brisbane, and the Sydney area. Nothing very new about that. But what about making a soldier's appointment to a brigade permanent, after the manner of the British regiment. I believe it would help a lot of the family problems if the soldier joined the brigade in Townsville and remained more or less permanently based there. They could buy a permanent home, put their children into school and leave them in the same system, and build up relationships with the local community. They might have to

go away to do courses, or to "do time" in Canberra, but then they would have the certainty of returning to their own brigade. Hence the importance of relating ranks to the position in the command structure and not relating it to the public service committee.

In addition many training areas could be closed. A soldier joins the particular battalion and becomes a member of a recruit platoon and the individual battalions take responsibility for initial training programmes. This will artificially increase the size of the battalions in peace time, but I believe it might be cheaper than running separate training institutions.

The number of officers in each battalion or regiment would be larger than the normal list complement, but this is to allow some of them to be transferred temporarily to Canberra or other assignments. The permanence should create a sense of loyalty to the battalion and the personnel who belong to it. This is a key part of morale.

EQUIPMENT

Another major economic consideration is equipment, at present running at about 22% of the defence budget.[5] Every new piece of equipment is many times more efficient than the piece it replaces, but often it's not many times more survivable. There is a constant trade off between effectiveness and numbers. In the 1960s the RAAF had ten combat squadrons a significant drop from ten years earlier. Today it has seven combat squadrons. In addition the fixed wing Fleet Air arm has disappeared too. If you were to graph the steady decline of air force strength and then extrapolate the graph into the future, sometime in the early 2010s, the air force would have no combat squadrons at all. The development of a tail for the combat forces to give flexibility and survivability in operations seems to be important. The experts could possibly work out a suitable balance but the RAAF programme of forming a close support squadron with Macchi jets seems a good idea. So too the RAN idea of three levels of forces, provided of course the top level is kept up to strength.

Perhaps recently retired equipment could be stored for a few years to provide a reserve which could be mobilised in an emergency, far more quickly than new equipment could be obtained. For example the Mirage and Iroquois aircraft could be stored at Woomera for a few years rather than being sold off cheaply to the first buyer. There are considerable problems with preserving ships, but Centurian tanks could be preserved against the day they might be modernised and used again.

RESERVES

One of the most discussed topics when it comes to efforts to reduce expenditure and increase effectiveness in the armed services is the area of reserves. Some see it as a way of having a larger force for less money. Reserves are necessary to form the basis for expansion of services, but they cannot take the place of full time personnel.

In the army they form the critical link between deploying the regular forces and the full mobilisation of the country for war. Every effort should be made to fully equip and maintain the efficiency of the army reserve forces.

There are more difficulties with the naval and air force reserves. You can't just take a crew, mobilise a reserve warship and sail away. The reserve frigates and destroyers of the US Navy still have about a third of their crew as regulars. These get left with all the dirty jobs as the reservists want to do the "good" jobs when they come onboard.

However, there are some things which reservists do well. In Australia they are used for Merchant Shipping control, a function which is only needed in war and which can be well handled by reserve crews. Reservists are also slated to take over the minesweeping functions, but many questions are raised as to whether they could attain a sufficiently high level of expertise needed to do the job. It's quite likely that they couldn't without a great deal of regular personnel support.

In addition reservists could man landing ships, such as a simplified Tobruk, with large scale maintenance done by civilians at Garden Island. The ship would only have to be commissioned for large scale exercises. They could provide the naval manning for supply ships or tankers which could be operated commercially, by say ANL, during the year and just taken up for naval use for exercises and emergencies. These could be built with naval specifications in mind and would be more easily used instead of merchants taken up from trade.

The air force has even greater problems and generally use reservists to fill out existing squadrons in supporting functions. The air force also faces the largest problem of the loss of skilled pilots to civil aviation. This could be tackled in three ways. First, by breaking the nexus with the Canberra committee system, pilots would not be promoted to the extent that they would become unemployable in regular flying formations and could therefore be posted back to flying squadrons. How many pilots have left the service because they were

placed in desk jobs and they really only wanted to fly?

Second it is quite clear that the air force will continue to lose pilots to civil aviation as the pay and conditions are so good. This probably will not change and the air force has to live with it. Perhaps some joint pilot training programme with the air force and the government civil air lines could be introduced. A joint training programme would be economic for both parties. Already some steps have been taken to keep pilots who have left the service, in some form of reserve. This is capable of considerable expansion. I believe that many civil pilots would gladly stay as reserve air force pilots and spend a few weeks a year updating their skills flying F/A 18s. They would not be as skilled as the regular pilots, but they would be much better than no pilots at all.

In the 50s, the air force maintained a Citizens Air Force of about five squadrons flying mainly Vampires. As aircraft became more expensive and complex this could not be maintained. But now is a good time to open the question again. Perhaps citizen air force squadrons could provide the third line aircraft for depth and air force needs. Planes such as the British Hawk, would be cheap enough, simple enough and effective enough for army support to be ideal for such a concept. Longer term maintenance could be done by civilians, perhaps by a large joint air force/civil aviation maintenance complex. The civil air lines have been having problems in this area for sometime. The Swiss air force is largely maintained by civilian technicians. What is important is to have the maximum capability to defend the country not the air force.

NEW STRUCTURES

It seems to the outside that there are too many structures for the come as you are war. Perhaps a radical change is needed here. The Canadians tried to abolish the individual services and ended up with a less efficient system run by more people. However, perhaps we could seriously consider abolishing the RAAF. The air force is and always will remain a supporting command. Give the training, transport and support aircraft to the army, the F111s and Orions to the Navy, and they can toss for the Fighter wing. Both services realize the necessity for air support and so the air elements are not likely to decline. There almost certainly will be a drop in efficiency, but if that is accompanied by a reduction of one third in all the administrative command structures in Canberra, it would be worthwhile.[7]

In addition the present Continental command would become effectively the army, and the Maritime Command would become the naval. It would seem that some considerable savings in the sizes of these commands could be made as a result.

PAYING THE BILL

Cost remains a major problem for the all defence forces in western countries. For political reasons it might be useful for the defence accounts to show those expenses which are incurred in the service of others. The defence forces rightly support the civil structure by flying politicians around the country, in customs work and fishery protection, in search and rescue, and in flood and fire relief. A great deal could be made of this contribution to Australia in the political arena. Secondly, most countries of the world manage to establish their defence priorities and lock them into five year style programmes. This is not done in Australia for a variety of reasons which are mainly political and partly economic. Politicians like to budget from elections to elections and five year plans lock defence expenditure out of the political realm. However, maybe it is possible to trade the radical restructuring of the defence administration for fixed five year programmes. Fixed programmes give by far the best results for the least cost. The present cost saving fluctuations are of the look after today and dawn tomorrow variety. A little like the man who only takes out life insurance at night, because statistics prove that most people die in bed.

TRUTH

One final addition and suggestion. We have become so used to cover ups, that the reflex action is not to believe anything that public relations people say on contentious issues. It does seem at times that some defence administrators are more determined to defend their office than Australia. In late 1988 and early 1989 a dispute arose over the inflammable future of the new synthetic army uniforms. Mr Michael O'Connor of the Australian Defence Association, and The Hinch Programme became involved.

A further series of complaints about the standard of regular army issued equipment followed, which confused the whole issue. However, the response from the Department was more in terms of an attack on O'Connor and Hinch rather than a genuine analysis of their attacks. Another case of killing the messenger who brings bad news.[8]

More recently there have been reports in the press concerning the retirement of the Chinook squadron. The reasons given in the public

media are in terms of the increased effectiveness of the new Blackhawk helicopters making the Chinooks unnecessary. U.S. and British defence organisations and experience in the Vietnam and Falkland Islands Wars seems to indicate a need for heavy lift capability for the modern mobile army. The defence administrators may close down the Chinook squadron but the simple reason is for lack of money. Most other explanations are simply public relations padding which continue to undermine public confidence in the full truth of official statements.

THE FUTURE

What solutions are available for the future? Service leaders continue their backs to the wall battle against government cutbacks, bureaucratic and general incompetence and public indifference. They face the continual problems of fluctuating appropriations and programmes, rising resignation rates, economic cuts, and difficulties in determining real and perceived threats. Only professional organisations can air possible solutions and explore future possibilities. It is only by raising difficult and improbable propositions, that future practical solutions to major problems can be found. Where are these solutions to come from?

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7. Lt Col Stephen O'Fought. "Nobody Asked me, But ..." *Proceedings* February 1989, pp.122-23.
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KAMIKAZE

from Page 16

The hit had reduced ***Australia's*** manoeuvrability. However, because of the damage she could not fire her heavy forward 8-inch guns to port, but still completed her bombardment schedule.

January 9, 1945, 1 pm a "Tony" attempted to hit ***Australia's*** bridge. Its wing tip caught a mast strut which swung him into the foremost funnel. On the evening of January 9, her job completed, ***Australia*** escorted the fast empty transports back to Leyte. Why the ***Australia*** had been singled out by the Kamikazes still remains a mystery.

Twenty awards were made for distinguished service.

In all, at Lingayen, ***Australia*** had lost 39 killed and 56 wounded. Many of the casualties were only 18 and 19 years of age and have the seas off the Philippines as their eternal grave.

IN DEFENCE OF CAR FERRIES PAINTED GREY

by

Lieutenant R.J. Griggs, RAN

As OOD of HMAS *JERVIS BAY* on Good Friday last, I was flicking through the February issue of the journal of the Australian Naval Institute when I stumbled across CMDR Allica's article 'A Sail Training Ship for the RAN'. To anyone who has not served in or with HMA ships *JERVIS BAY* and *TOBRUK*, CMDR Allica's article may reinforce the subconscious belief that both of these ships are more akin to floating gin palaces than warships. To those of us who have served in these ships and seen the work that they do, CMDR Allica's article was an affront. The article's major premise, that a sail training ship (STS) can replace *JERVIS BAY* and *TOBRUK* in the training roles and fulfill the RAN's basic navigation training requirements, is at best, sophistic.

The article not only contains a major argument that is in itself specious, but it is also riddled with numerous errors of fact which further detract from its credibility. This response is necessary to restore the balance and should serve to clarify some sections of CMDR Allica's article; it is most certainly not an attack on the STS concept.

Most readers of this journal are more than familiar with the primary role of *JERVIS BAY*. Since the ship entered service the basic role has remained unchanged; this is despite the many superficial changes to the types and lengths of training cruises. *JERVIS BAY* conducts the majority of the Junior Officer's Common Training (JOCT) cruises and Seaman Officer Application Course (EXAC) training cruises; both cruises being conducted concurrently. The JOCT cruises are designed to give junior officers their first major exposure to shipboard life. Trainees work in all departments alongside junior sailors. They do not keep officers duties but form part of watch on deck or engineering watch at sea and part of the duty watch in harbour. In *JERVIS BAY* the trainees can see how a major fleet unit is organised and how the departments mesh together. In a STS, with a maximum complement of 15, this would not be possible.

JERVIS BAY is above all a navigational training ship — it provides 80 per cent of the pilotage training that junior seaman officers (EXACs) receive and 100 per cent of their practical coastal and celestial navigation training. The lessons learnt on the training cruise are no longer reinforced by a navigation course in phase 3; this makes the *JERVIS BAY* training cruise the only major package of practical navigation training they will ever receive. It would be quite wrong not to mention that throughout 1988 and 1989, HMAS *STALWART* has and will be employed in the training role due to *JERVIS BAY*'s Bicentennial Military Tattoo (BMT), refit and Exercise Kangaroo 89 commitments.

JERVIS BAY was an ideal acquisition for this training role, particularly at just under A$6 million for both purchase and subsequent conversion. At the time the MV *AUSTRALIAN TRADER* was being disposed of, the ageing destroyer HMAS *DUCHESS* was nearing the end of her useful life. HMA ships *VAMPIRE* and *VENDETTA* were still front line units; the arrival of the first FFG was still some years away. To convert another destroyer would have reduced the operational destroyer force to 10. Whatever the political machinations, the acquisition and conversion of *JERVIS BAY* to the training role meant that *DUCHESS* could be paid off, the RAN's force structure could be kept intact and a manpower saving of some 150 personnel could be achieved.

JERVIS BAY provides a relatively stable platform for celestial navigation training, something that is vital when students make their first foray into the practical side of this art. The training bridge is fully equipped for the student to conduct pilotage runs free from the intimidation of the main bridge; generally only 3-4 people are on the training bridge during a run. This has been found to put the student more at ease which in turn leads to a more conducive learning environment. Blind pilotage too is catered for in a purpose built compartment and, again, the student does not have to compete with ship's equipment or the distractions of a bridge or operations room. The navigation classroom is large enough for all students to work at the same time; charts,

publications and equipment are close at hand. The classroom is situated in an area away from the main passageways and areas of communal activity. I suggest that, to recreate these facilities in a STS to the same standard that exists in *JERVIS BAY*, the RAN would have to purchase a ship the size of *EAGLE* (a touch more expensive than A$6.5) and not *YOUNG ENDEAVOUR* or *SPIRIT OF NEW ZEALAND*.

CMDR Allica likens life onboard *JERVIS BAY* as more akin to service on a passenger liner than a destroyer; he postulates that trainees will not be in awe of the sea because *JERVIS BAY* is such a large ship. He even alludes to the fact that they will feel no pride in the ship due to its size. The trainee accommodation prior to mid 1988 was admittedly quite comfortable. The modifications made to the accommodation in 1988 were not, as stated by CMDR Allica, to rectify this deficiency. They were implemented for two reasons totally unrelated to junior officers' training. Firstly the addition of messdecks was to alleviate the problems involved in the transportation of the BMT regiment on its Australian odyssey. The second and longer term aim was to enhance *JERVIS BAY*'s troop carrying capability and allow for the embarkation of an air group. With these modifications now complete, *JERVIS BAY* can accommodate up to 120 extra personnel. Certainly the ship can more than double CMDR Allica's projected trainee throughput of a STS trying to achieve similar training objectives.

The desire to make the most of our training dollar is important; unfortunately the answer is all too often to streamline the course, cut this out or to let ships do that at sea. But, surely, the key to cost effectiveness lies in the end product; if we do not produce a junior officer with the skills we want, then the particular exercise is not cost effective as they will then require further training to meet the basic requirements. We must not lose sight of what sea training in the RAN is all about and that is to train personnel for service at sea in ships of the fleet.

Training a junior officer to navigate a STS is not what is needed. The techniques of pilotage are taught not to lure unsuspecting Midshipmen into the navigation fraternity, but to arm them with those essential basic skills that they need to be an OOW in the fleet. A STS is incapable of operating in company or of conducting the plethora of seamanship evolutions that warships engage in. Fleet units do not tack their way in and out of port; OOW's must be able to handle a changing situation at speeds of more than 7 knots and they must join their ships with an understanding of the capabilities and more importantly the limitations of a ship's propulsion plant.

The response by sailing devotees is that sail is the only true way to come to grips with the effects of wind and tide. I would suggest that few of them have witnessed the effect that 20 knots of beam wind has on 22,000 square feet of *JERVIS BAY*'s superstructure in the last mile of an anchorage run, let alone during a difficulty berthing. *JERVIS BAY* is demanding with any sort of wind and trainees must plan to cope with this and overcome it, not just make leeway until it is time to tack. Having come to grips with navigating a ship the size of *JERVIS BAY* they are well prepared for service in warships. The benefits of the STS that CMDR Allica espouses are all well and good. The bottom line however, is that the RAN is about warships, propelled as they are by gas, steam or diesel plants, travelling in straight lines. Our basic navigation training requirements cannot be met by a STS hence a STS cannot be described as a cost effective option.

CMDR Allica states quite categorically that life onboard *JERVIS BAY* and *TOBRUK* is "comfortable". There would be at least 200 ADFA Midshipmen who would disagree that life in *TOBRUK* at sea is comfortable; she is without doubt the most lively ship in even the smallest of swells, but then, flat bottomed ships generally are. Turning to the already maligned *JERVIS BAY*, the ship which spends more time in the roaring forties than any other fleet unit. The Tasman Sea vents her fury on *JERVIS BAY* with monotonous regularity and despite her size and stabilisers, life is far from comfortable. A trainee is in awe of the sea no matter what ship he or she first goes to sea on. It is more likely that they would find the thought of being totally isolated in the middle of the Tasman in a gale more awe inspiring than watching the afternoon sea breeze spring up whilst sailing the inner barrier reef.

Employment of women at sea is raised by CMDR Allica as advantage of the STS. Women make up approximately 10% of the ship's company of *JERVIS BAY* and are employed in no less than 6 categories or specialisations. It is the most well equipped ship in the fleet to handle the permanent employment of women at sea and provides approximately half of all fleet billets currently filled by women.

The next area that requires some clarification is CMDR Allica's statement that *JERVIS BAY*'s "alternative role of heavy lift has no tactical application." Unfortunately *JERVIS BAY* does not possess a heavy lift capability. What *JERVIS BAY* can do is provide logistic support in exercises, times of national emergency or for contingencies; she also has the capability

to provide administrative sea transport using her high volumetric cargo capacity. The ADF's reliance on *TOBRUK* and *JERVIS BAY* in this role is great; both the BMT deployment and forthcoming operations in Exercise Kangaroo '89 are telling examples of this reliance.

CMDR Allica's claim that *JERVIS BAY* "is limited by the need for dedicated roll on — roll off facilities in port" is wrong. The ship has on numerous occasions both alongside and at anchor conducted transfer of cargo to LCH's; *TOBRUK* and *JERVIS BAY* have conducted stern door marriages alongside and discharged *JERVIS BAY*'s cargo without the use of any roll on — roll off facilities. Also, *JERVIS BAY* has discharged cargo over a standard wharf using a Mediterranean moor. The charge that *JERVIS BAY*'s secondary role has no "tactical application" is quite patently incorrect; the ability to insert a company of troops by air from the ship or to operate an ASW helicopter from the ship are surely examples of tactical applications. We need look no further than the recent troubles in Fiji and Vanuatu to see the tactical application of the three ugly ducklings — *JERVIS BAY, TOBRUK* and *STALWART*.

CMDR Allica's simplistic argument that a STS can replace the RAN's current sea training force needs to be put in perspective. The problem with CMDR Allica's article is not the contention that a STS has an important role to play in the RAN; as an adventure training and character development platform it would prove outstanding. My objection is that he presents a seemingly achievable and economically viable proposal that in fact would be a retrograde step for the RAN. We would end up with a less capable training vessel, trainees who were ill prepared for their employment in fleet units, less women at sea and a drastic cut in the ADF's logistic support capability.

THE AUTHOR

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BOOK REVIEW

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as much trouble — are chaplains more understanding? The end of the war brings great happiness initially but also the sudden realisation of where to go now, at age 21 with a young wife whom he had hardly ever seen, as well as the sad memories of lost mates.

While I found the book difficult to read initially the accounts of his later training, his thirst for action and his subsequent frustration made it more enjoyable and reminded me of the similar personalities of some of his current RAN counterparts. Some of the spontaneous pilot's songs revive memories of other songbooks of the RANN which are well remembered by many but thankfully not available through music shops. In summary a good book once you got about one third of the way through it.

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THE SOUTH PACIFIC NUCLEAR FREE ZONE AND REGIONAL SECURITY

(With Special reference to Sea Lanes of Communication)

by

W.T. Roy

The security concerns of any specific region of the world can be studied usefully only in the context of contemporary global power patterns and alignments. At present the dominant feature of the global pattern is the ongoing rivalry between two superpowers, each heavily armed with nuclear weapons, and the simultaneous existence of at least three other powers with similar capabilities of a lesser, but still significant, degree. Periodically, one or other of the major rivals exhibits a flash of sweet reasonableness, which holds promise of scaling down the intensity of competition. The most recent instance of this is a Soviet proposal to withdraw from Vietnamese facilities in exchange for a similar abandonment by the USA of its basis in the Philippines. However, the question arises immediately of whether such a proposal is indeed evidence of voluntary modification of the proposer's position. In the interests of promoting harmonious relations, or whether instead it is tantamount to an admission of lack of capability to sustain its existing position. Proceeding from this to a more general proposition concerning the nature of superpower status, it seems evident that, in its ideal form, such status requires the capability to project its presence ubiquitously, without fear of being baulked or pre-empted by its opponent. However, this ideal has never been fulfilled. Indeed, the record of superpower confrontation after the end of the Second World War has several examples of each of them imposing on itself a self-denying ordinance, with respect to a specific region, which it assumes to be of vital concern to the other. For example, clandestine subversion aside, Soviet abstinence from maintaining a forward presence in Latin America is matched by America's lack of influence in Eastern Europe. In short, a state of mutually observed standoffs prevails. The only conditions in which this *status quo* is likely to be altered is if one of the powers detects a decline in the capability or will of the other to maintain its special position in what was, until then, an uncontested region, and considers that exploiting this opportunity to alter the balance of influence in its own favour is worth the risk. So far this has not happened, unless the Cuban missile crisis is read as an historical example of a miscalculated attempt by the Soviets to carry out just such an exercise, only to discover that the risk to itself had been gravely underestimated, thus forcing its withdrawal from an unexpectedly untenable position.

If we apply this theoretical construct to the South Pacific region, it is historically evident that it has hitherto had all the characteristics of being an American lake, although that power's influence has been indirectly exerted, largely through surrogates in the ANZUS alliance system. Evidence of this can be found in the virtual absence hitherto of any Soviet naval surface craft[1] in the area, notwithstanding that much of it consists of recognised international waters. Hence, the South Pacific cannot be regarded as an arena of superpower confrontation. Further, if it is agreed that the term 'Nuclear Free' is a synonym for 'Nuclear *Weapons* Free', then the South Pacific has always been deserving of being thus designated. None of its states has the technology to produce such weapons, nor do they store them on behalf of states that have. It may well be enquired then, why South Pacific states found it necessary to declare their region a Nuclear Free Zone (NFZ), when it already enjoyed that status *de facto*, and also was not an arena of superpower competition. The answer clearly is that this happy state of affairs was perceived by South Pacific states as having no *guaranteed* permanence, and further that it was already threatened by forseeable events in the near future. Perhaps the most important of these is the renegotiation in 1991 of the Antarctic Treaty of 1959, which internationalized and denuclearized the South Polar continent. This event alone may be the harbinger of international rivalries being transferred to what is currently a NFZ. To better

comprehend these South Pacific concerns, it is advisable to consider briefly the origins of the SPNFZ, formally established on 6 August 1985 by the Treaty of Rarotonga, and also the motives and policies of its two major signatories — Australia and New Zealand.

ORIGINS OF THE SPNFZ

Precedents for NFZs are not new, but they seldom got past the stage of proposals and discussions, which led to nothing because of persistent suspicion of each other among prospective participants. Indeed, the postwar European scene is littered with the remains of aborted initiatives for the setting up of such zones.[2] Nevertheless, by coincidence, the only two NFZs that *did* come to fruition are contiguous to the SPNFZ. The first in Antarctica (1959), and the other is the Latin American NFZ set up by the Treaty of Tlatelolco in 1967. In fact, the latter was not only something of an inspiration to Pacific states, but provided a convenient model, even down to the inclusion of Protocols,[3] which nuclear powers were invited to sign and ratify to indicate their willingness to underwrite the non-nuclear states of the Zone.

Notwithstanding this encouraging example, and an early attempt in 1975 by New Zealand, Fiji and Papua New Guinea to get UN support for a NFZ, nothing practical was to take place until, in 1983 and 1984 respectively, Australia and New Zealand elected Labor governments that are still (1988) in office. Since both Labor Parties have, in varying degrees, long advocated the creation of an NFZ, the time was ripe to try to implement this resolve. Fortunately for both parties (and governments), Australia and New Zealand were members of the South Pacific Forum, which provided them with a readily available venue to muster support for the scheme.

The South Pacific Forum emerged first as an addendum, and then as an alternative to the South Pacific Commission's annual Conference. It represented the interests of Pacific states, which shortly before had been colonies of the metropolitan powers, that were the founders and movers of the South Pacific Commission. With the rapid progress of decolonization in the South Pacific, the Forum soon superseded the Commission and its Conference in importance. Further, through its annual meeting, it provided a convenient venue for initiating detailed discussion by a working party of the NFZ proposal. The resultant draft Treaty was tabled at the 1985 meeting of the Forum, held in the Cook Islands, and duly signed by all those present excepting Vanuatu, Tonga,[4] and the Solomon Islands. Ratifications followed at varying intervals.

The determinants of the willing support of South Pacific island status also bear examination. In the first place, though newly emerged from colonial states, and palpably affected by feelings of revived ethnonationalism, they shared common problems of remoteness, poverty, overpopulation and unemployment — all of which made them in a measure dependent on the developed economies of Australia and New Zealand, as donors of aid and Meccas for emigrants from the islands. Further, most of the new indigenous regimes (again Vanuatu excepted) were based on hereditary chiefly traditions and consequently tended to be conservative. If we add to this the factor of religiosity, which is endemic to most island populations, it is easy to see why (unlike other Third World States — say in Africa) the Pacific states have a marked tendency to lean towards the Western world, particularly as embodied in neighbouring Australia and New Zealand.

However, there is one notable exception to this preference for the West, and that is France. Of all former colonial powers in the Pacific, France alone clings grimly to the role of metropolitan overlord of far-flung territories. Notwithstanding French assertions that their system is not a colonial one, but based on the concept of a Union of all Francophone territories, with representation in the metropolis, the other Pacific states remain unimpressed. The confrontational situation that exists between settlers and *indigines* in New Caledonia has attracted widespread support for the Kanak cause among Pacific states. Nevertheless, the main concern with a continuing French presence in the Pacific is not political, but environmental, and is related to their long continuing series of nuclear tests on their island territories of Mururoa and Fangataufa. Admittedly, tests are no longer atmospheric ones, following a successful action in 1974 by Australia and New Zealand in the World Court. Nonetheless, large numbers of the ordinary populaces of the South Pacific (including Australia and New Zealand) remain unconvinced by French assurances that radiation hazards are minimal and environmental pollution and destruction non-existent. Ironically, these French assertions are verified in an independent report prepared by the New Zealand Radiation Laboratory after extensive field tests at Mururoa.[5] The successful French sabotage of the Greenpeace flagship *Rainbow Warrior* in Auckland harbour (10 July 1985), and the subsequent fracas between New Zealand and France over the fates of two captured French

agents, did little to enhance the French image in the South Pacific. Hence, almost in spite of herself, France has served as a focus of disapproval or even hate, and unwittingly proved a catalyst that has strengthened the sometimes fragile bonds that unite the scattered micro-states of the SPNFZ.

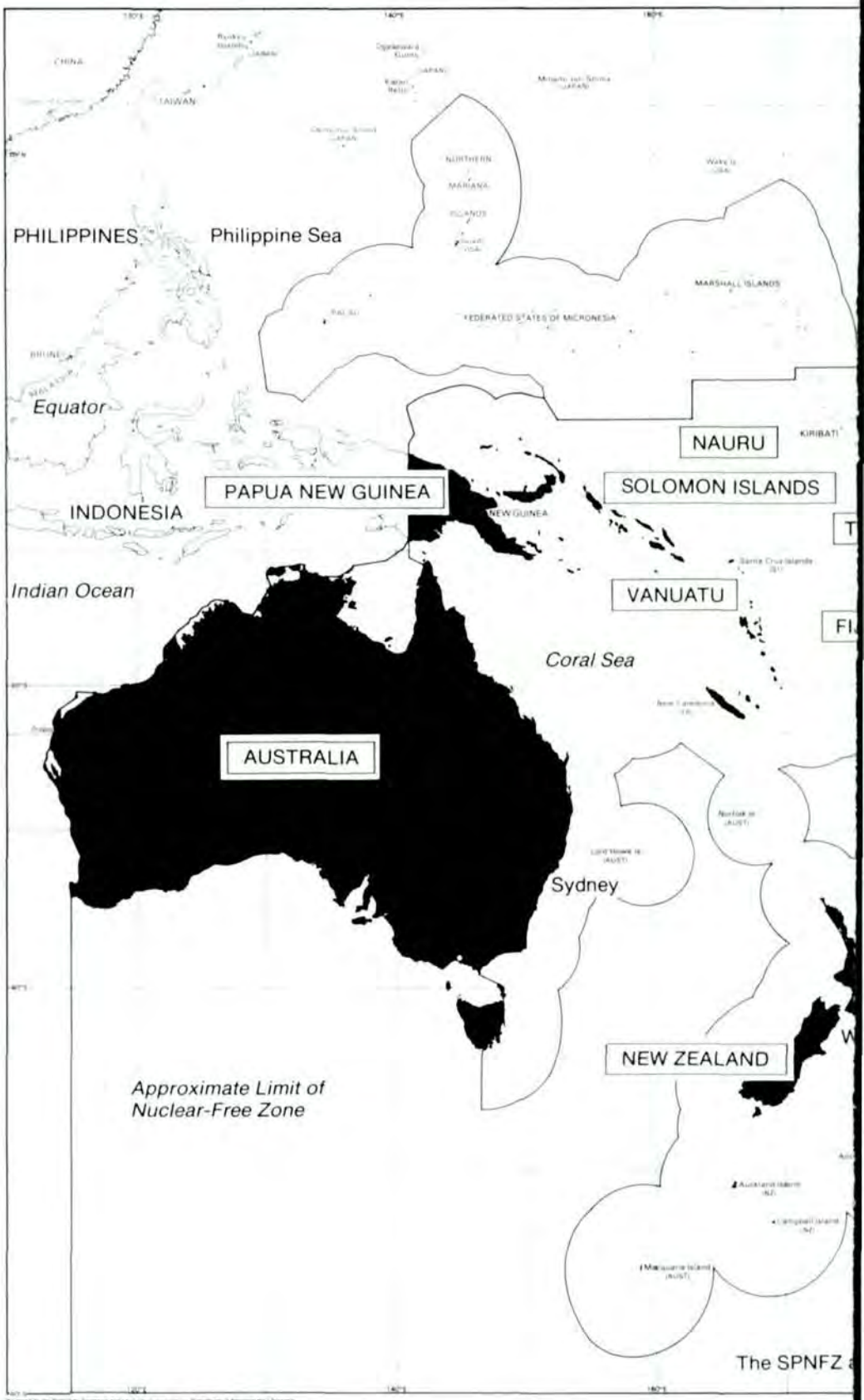
Finally, there is another bonding factor impelling South Pacific states to hang together in the SPNFZ. This is the appearance of Soviet influence in the South Pacific, which is regarded as unwelcome or even threatening. Admittedly, so far the Soviet presence has not been a military one, but in the form of fishing fleets, commercial vessels (both freight and passenger) and oceanographic survey ships. However, what SPNFZ governments find disturbing is the attempt to penetrate the nascent Trade Union movement in the region by seeking affilitations of island unions to the World Federation of Trade Unions (WFTU), which is Soviet controlled through its headquarters in Prague. Again, Gorbachev's celebrated Vladivostok speech (July 1986), giving notice of increased Soviet interest in the Pacific, reinforced by similar comments by Foreign Minister Shevernadze in Canberra (4 March 1987) do little to reassure basically conservative populations about Soviet intentions. Even though the US has won no approval because of its failure to condemn French nuclear testing, to control only tardily the alleged depradations of its tuna fishing fleet, and refusing to sign the relevant Protocols of the Treaty of Rarotonga, it still remains the less feared and disliked of the two superpowers. In fact, one hope of the signatories is that the very existence of the SPNFZ will in some way induce the two antagonists to carry out their confrontations elsewhere.

Perhaps the enthusiasm of the Australian and New Zealand governments for the SPNFZ needs to be explained. It would be too simple to suggest that a strong thread of pacifist ideology runs through all Labor governments in the Western world, and that Australia and New Zealand are no exception. If anything, the quite considerable support for anti-nuclear policies among their mass populaces can be attributed to a relatively new phenomenon — this is the so-called 'Peace Movement'. It is demonstrable that the original role model was the British CND. However, with the passage of time, a strange metamorphosis has taken place in the movement in its antipodean habitat. First of all, it has embraced a variety of causes, some of which have little relation to the original concerns of CND. Examples of preferred causes are political independence for New Caledonia, the abolition of *apartheid* in South Africa, the welfare of Polynesian women, Aboriginal and Maori land rights, ending American 'imperialism' in Grenada, Nicaragua etc. — The list is tediously long. So also is the variety of peace groups. (350 in New Zealand alone) and their sources of support — academics and other 'professional' people, feminists, ecological protectionists, clergy of various denominations, housewives, trade unionists and teenagers. With such an astonishing plethora of supporters, it would be idle to account for this mobilization by some facile conspirational scenario, or the even simpler thesis that it merely represents the exploitation of the guileless and gullible by the wicked and the venal. In fact, what appears to have happened is that the Peace Movement, in its many manifestations, has by design or even accident, touched a responsive chord in the descendants of settler populations, once unquestionably loyal to the country and culture of their origins, but now increasingly aware of an independent identity — and a Pacific one at that. This new-found nationalism expresses itself in diverse ways. New Zealand, for example, has taken the path of non-nuclear dedication to the extreme point of having virtually frozen itself out of the protective ANZUS alliance, on account of its intransigence over the matter of port visits by nuclear powered or even potentially 'nuclear capable' ships. While Australia is no whit less nationalistic, it has hitherto remained in closer association with its American ally and nuclear armed guarantor — the USA. Despite this, it must be noted that, even here, there is a perceptible drift towards greater independence or even isolationism implied in the recommendations of the Dibb Report of 1986 and the Defence White Paper of 1987. Notwithstanding these marked differences, both states have made common cause in their sponsorship, membership and virtual underwriting of the SPNFZ, and it is very unlikely that any conceivable change of governments will terminate their participation in this zonal enterprise.

SECURITY OF THE SPNFZ AND ITS SLOCS

Internal Threats

Although this study is concerned chiefly with external threats to the area, which will be addressed shortly, it is abundantly clear that internal threats to its security are also of great importance. If such threats mature to the point where the internal stability of states is seriously affected, then it follows that their capability of responding effectively to external threats is correspondingly reduced. While there are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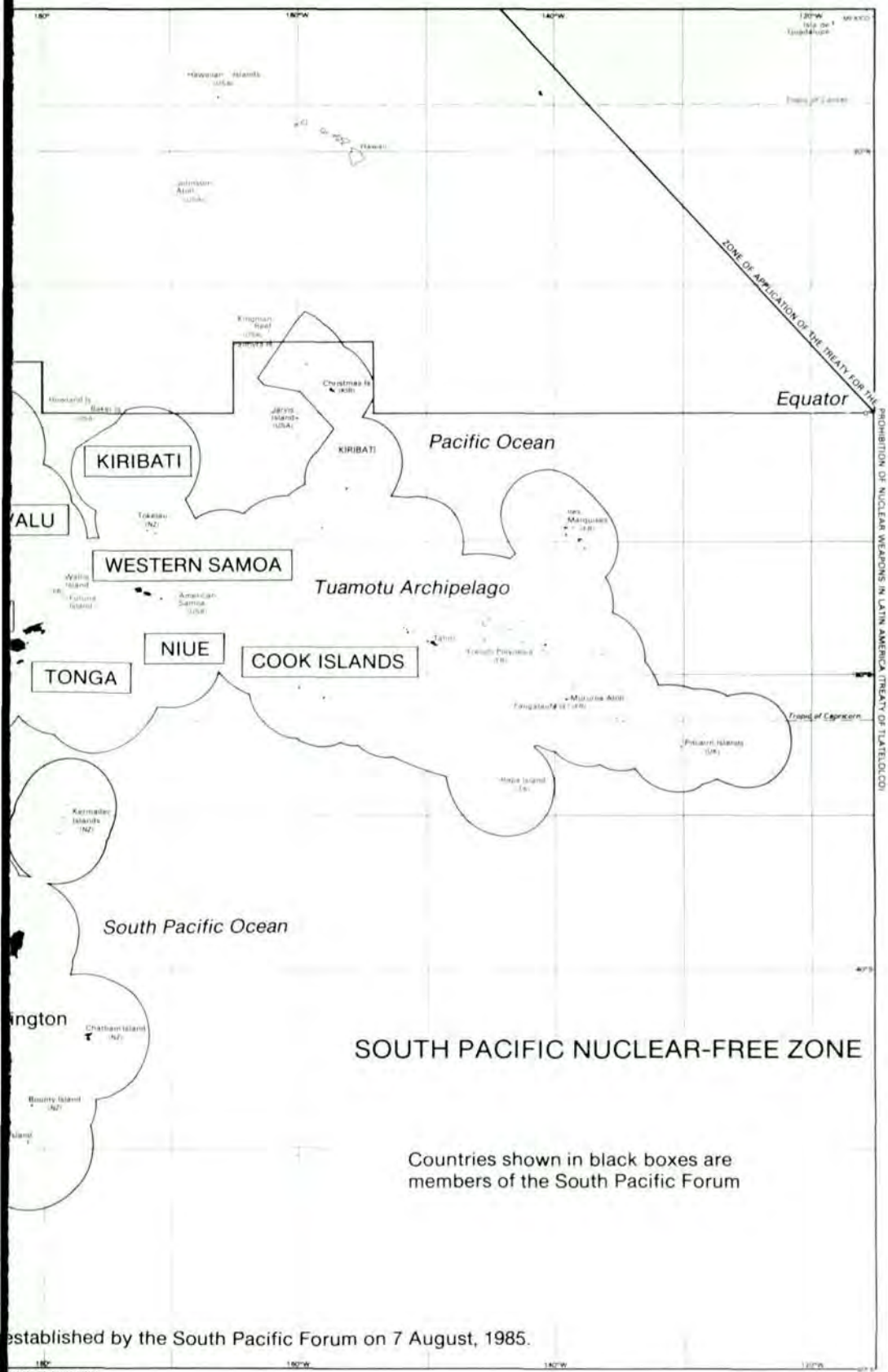
Approximate Limit of Nuclear-Free Zone
The SPNFZ



...stablished by the South Pacific Forum on 7 August, 1985.

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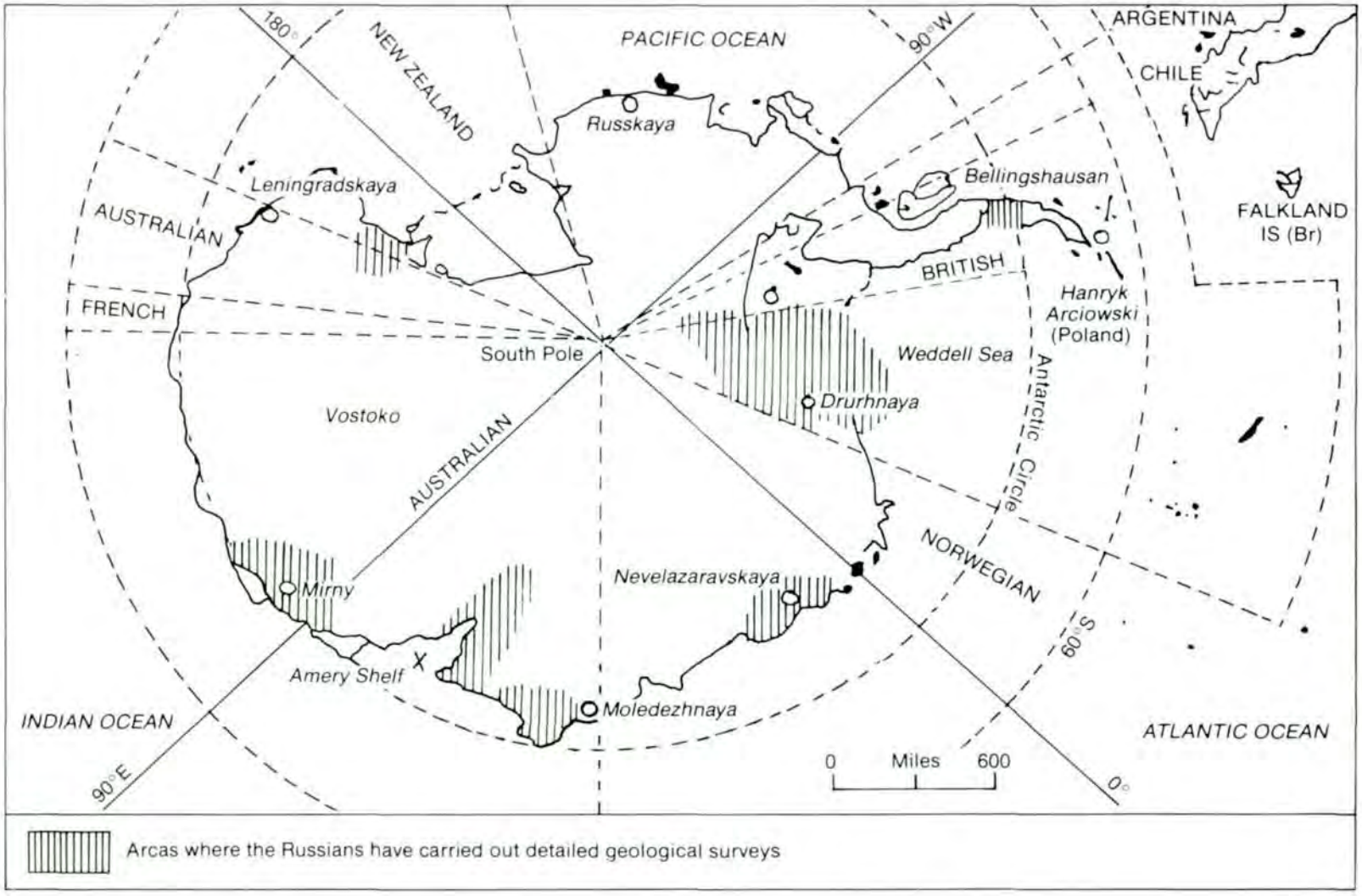
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BRITISH
FRENCH
Hanryk Arciowski (Poland)
South Pole
Weddell Sea
Vostoko
Drurhnaya
Antarctic Circle
AUSTRALIAN
NORWEGIAN
Mirny
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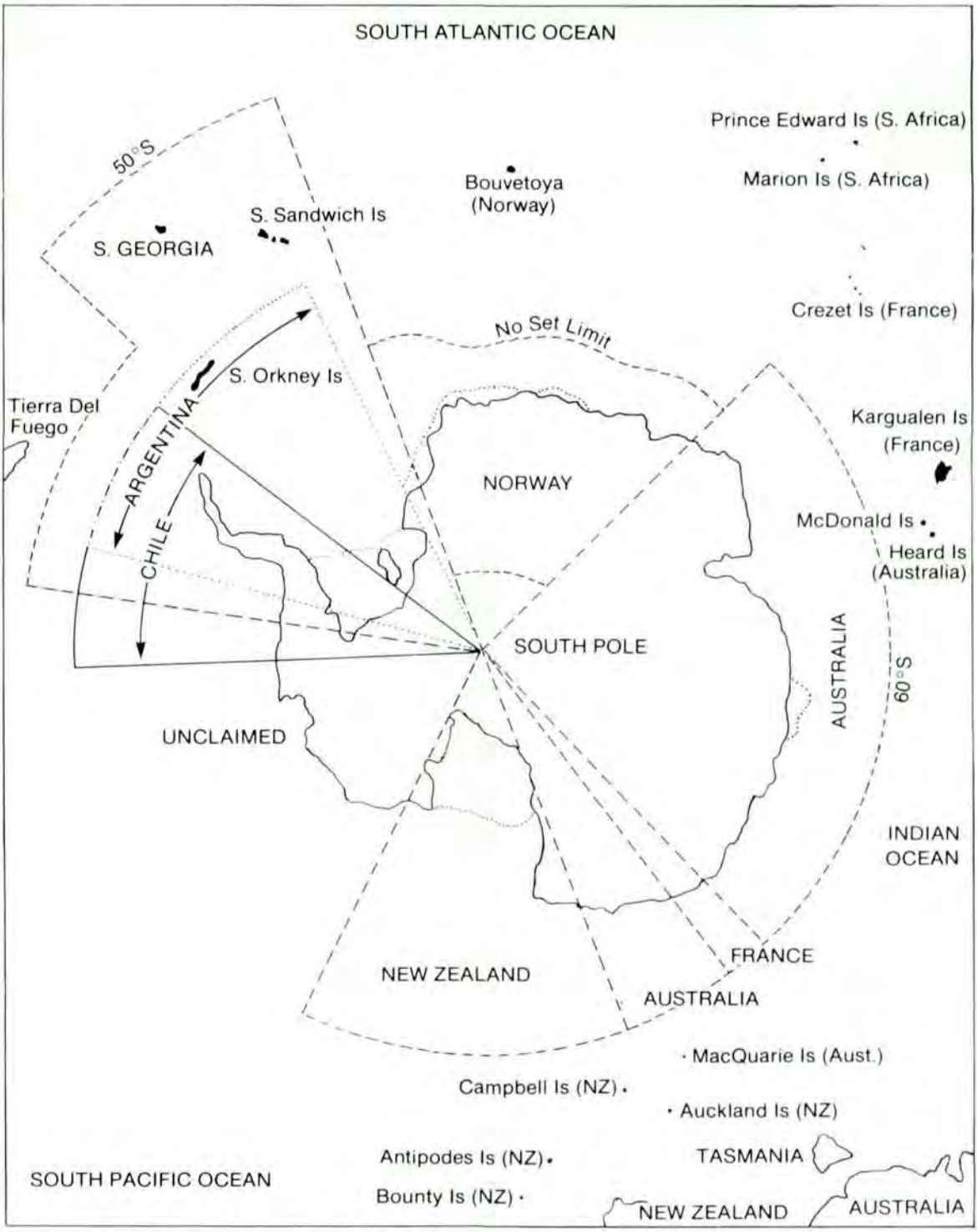

TERRITORIAL CLAIMS IN THE ANTARCTIC REGION

several types of internal threats, three stand out as being particularly dangerous, because they affect the whole fabric of the society in which they appear.

First of all there is the existence of ethnic conflicts, historically based but recently revived and exacerbated, mainly by demagogues apparently for no better reason that their own egotistic satisfaction. Next, there are systematic attempts to undermine the economic structure of more developed states like Australia and New Zealand, by small but dedicated groups ideologically opposed to the system. Though many members of these cadre parties appear to be self-motivated, they do receive external encouragement and material support to continue in their self-appointed mission of overthrowing the economic and political systems of the states in which they live and of which they are citizens. Their dedication to their task enables them to exert a degree of malign influence out of all proposition to their numbers. Thirdly, there is a threat of recent origin, all the more dangerous because of its insidious nature. This is the systematic penetration of the educational systems of Australia and New Zealand by a multidisciplinary mongrel?) 'subject' labelled 'Peace Studies'. Since this has appeared at all levels from the post-graduate to the elementary it bids fair to influence a whole rising generation. Now if its concern was the systematic study of conflict resolution, then it would be academically and pedagogically respectable. However, a glance at the curriculum proposed and the textbooks prescribed makes it instantly apparent that objectivity is the least likely characteristic of the enterprise. Taken severally and collectively then these three internal threats, if permitted to burgeon, are guaranteed to produce societies deeply divided by a variety of conflicts, economically in decline, and vitiated of any will to resist external encroachment. Grim though this scenario may seem, there is plenty of evidence to prove that it is no figment of imagination and its potential *denoument* must be a source of considerable satisfaction to the enemies of the Western world and its way of life.

External Threats

The difficulty of identifying readily perceivable external threats to a region increases in proportion to the distance that separates it from major foci of military power. One consequence of this phenomenon in the case of the SPNFZ in general, and Australia and New Zealand in particular, is the ready adoption of the facile assumption (presented as a rational deduction) that no threat exists. In a slightly modified form the qualification is sometimes made, in both states, that any perceptible threat is at least ten years away. It remains something of a mystery why this precise time span was chosen and by whom. Nevertheless, it has become a shibboleth on which much ANZAC military planning is predicted. This seems to be almost an act of deliberate self-deception, when candidates for the role of potential external aggressor are clearly silhouetted on the horizon of the South Pacific. If nothing else the protein hungry and/or overcrowded populations of the USSR, PRC and Japan cannot but look at the abundant maritime food resources of the sparsely populated South Pacific and Antarctic with envy. To obtain preemptive or even monopolistic access to even a portion of this plenty would be an enterprise worth considerable effort or even some risk. This is not, even for a moment to suggest that military adventures at some distance from home bases is a favoured or even seriously considered method. Even where the naval capability exists — as in the case of the USSR — the cost/risk equation is not likely to work out to the adventurer's advantage. Far better then is the alternative of economic penetration and virtual purchase of forward positions in Oceania, in states with friendly or at least malleable governments. Whether this amiable attitude is based on compatibility of ideology or perception of personal advantage by the island leaders, is a matter of little moment. The end result of an established forward position, from which to exploit the riches of the sea or of renegotiated spheres of interest on the Antarctic icecap, is a worthwhile end in itself.

Although the PRC and Japan (even partially remilitarized) have been cited above as possible candidates for the role of South Pacific interloper, this is currently in the realm of theory. The USSR presents a rather different case. Not only has it given notice of intention to play a larger role in the Pacific, but it has steadily built up its resource base in its Far Eastern territories, encouraged their accelerated settlement, and underpinned it all by posting about one third of all its armed forces in the area. Further, the acquisition and enhancement of substantial base facilities at Cam Ranh Bay and Da Nang now gives the USSR the capacity to thrust Southward when the occasion offers. Meanwhile, the Soviet leadership seems content to play a waiting game, using considerable experience and expertise in the field of subversion to erode rival influences in the South Pacific, and promote the emergence of governments likely to be complaisant or even act as surrogates.

In fact, the best of all worlds from the Soviet point of view, would be to achieve the fruits of successful military enterprise without ever having undertaken the risks. However, such a 'best case' scenario is never confidently predictable, so a pragmatic and cautiously opportunistic Soviet leadership may find itself forced to take steps that might lead it closer to conventional conflict than it deems safe or desirable. These potential circumstances unavoidably involve the SLOCs of the SPNFZ.

SLOCS OF THE SOUTH PACIFIC

While the signatories of the Treaty of Tlatelolco are faced with the possibility of interdiction of maritime traffic travelling up and down sealanes more or less parallel to their coasts, connecting South American ports with each other, Panama and the US, these lanes are not nearly as vulnerable as those of the SPNFZ. To start with, the former are within comparatively easy reach of naval forces operating out of their native harbours, and also of the formidable US naval capacity on both coasts. Further, at least one of these states — Chile — has a specifically Pacific orientation, a strong naval tradition, and a known antipathy (at least at governmental level) to foreign encroachment, especially of communist origin.

On the other hand the SLOCs of the SPNFZ criss-cross vast areas of ocean, carrying veritable argosies laden with primary produce, minerals and manufactured goods to and from Asian markets, the US and also, *via* Panama, to declining, but still valuable traditional markets in Europe. These SLOCs are particularly vulnerable to interdiction in the long reaches they must cover, and any protective measures within the capabilities of the Australian and New Zealand navies are woefully inadequate, because of the miniscule size of those forces and their extremely limited operational range.

Lesser used SLOCs in the region are those running more of less in an East-West direction in approximately the same latitudes which New Zealand lies. Where these do not terminate in Chilean ports, they round the Horn using either the Strait of Magellan or the Drake Passage. Because of the much greater distances involved, particularly if the final destinations are Argentina, Brazil or even Europe, normal traffic is not of great significance (approximately 100 vessels a month). However, in the event of the closure of the Panama Canal because of regional conflict, sabotage, or the installation of anti-capitalist/anti-Western government, no option remains but for traffic to move Southwards and use the *constricted* SLOCs already named. One estimate puts the increase at a staggering 900% representing 1047 ships a month.[8] It can be argued that the tremendous distance separating these South Pacific SLOCs from Soviet naval units based in Kamchatka-Petropaviosk, Vladivostok or even Cam Ranh Bay, are in themselves adequate protection from interdiction. However, this does not take into account the possibility of the Soviets shortly finding a congenial host nation among the micro-states of Oceania (say Vanuatu), nor the fortitude of Soviet submariners operating patrols at distances and for periods unacceptable to their Western counterparts, nor the convenient proximity of Soviet scientific stations in Antarctica to the SLOCs in question. Indeed, this last consideration merits some amplification.

Since the internationalization of Antarctica by the 1959 Treaty, rival territorial claims have been in abeyance, and several states have sent scientific expeditions and established stations (some permanently manned and others intermittently) around the ice-cap. No state has been more active than the USSR, commencing in 1956 and completing a circle of stations — seven of them permanent. Of these, three — Leningradskaya, Russkaya, and Bellinghausen — are admirably placed to monitor traffic using the southern most SLOCs, and therefore to direct interdicting submarine forces to their targets. Since Russkaya (established 1980) is in Marie Byrd Land, which has not been claimed by any nation, this Soviet establishment with potential for future territorial claims caused concern in Australia and New Zealand. *Pravda* devoted an article at the time refuting "accusations made in the Australia press' about Soviet territorial ambitions. Unfortunately no such accusation had been made, so it seems likely that the Soviet disinformation ploy of planting a story, which it could then refuse, went awry, when *Pravda* duly refuted the concocted story without being aware that it had failed to appear. Nevertheless, this episode adequately illustrates the importance that the Soviets attach to the area and their established position there.

In summation then, it has been established that the SLOCs of the South Pacific are no less vital to the continued prosperity of the Free World economics they connect than their North Pacific and Atlantic counterparts, but are far more vulnerable because of their excessive lengths and the military weakness of the Austro-Oceanic states that should protect them. Further, the existence of a palpable threat in the form of a well armed Soviet presence to the North cannot be denied, any

more than its potential to pursue economic, political or even territorial prizes if and when opportunity offers. Indeed, in any escalation of conflict short of nuclear war, the vulnerability of the SPNFZ would be an invitation to such a predator, which predictably would treat the Treaty of Rarotonga with contempt, despite its ritual endorsement of its Protocols. What countermeasures can be devised to meet this potential threat to the fragile prosperity and tranquility of the South Pacific?

COUNTERMEASURES AND CONCLUSIONS

The best possible scenario is one of co-operation between the states of the SPNFZ — particularly Australia and New Zealand — and the states that are at the other end of the South Pacific SLOCs. Clearly some of these — the US and Japan, closely followed by the ROK and ROC — are better placed than others to secure longer reaches of these SLOCs than they currently do. However, in a rational scenario, it would be unwise to exclude the possibility of invoking the participation of the PRC, which has both the motive and the means in the form of a navy with burgeoning blue-water capability. Again, two states not particularly in favour with the SPNFZ states are Chile and France. Nevertheless, they are favoured by geography and have the naval capability to intervene in the critical middle reaches of the South Pacific SLOCs. Hence, a preplanned and regularly co-ordinated pattern of counter-interdictory measures, consistently followed by an admittedly ill-assorted set of collaborators, is probably the best of all possible deterrents to external threats to the region. Clearly, however, this countermeasure is contingent on all potential partners displaying a degree of rationality in framing defence policies, that they have so far failed to exhibit — even intermittently.

The worst scenario imaginable for the South Pacific completely negates its pretensions to high-sounding moral leadership of other nations, on the grounds that it has embraced a 'nuclear free' philosophy and institutionalised it by treaty. This case could arise from internal causes alone. Ethnic rivalries being allowed to escalate to virulent hatred, economic management for the prosperity of all being sabotaged by ideologically opposed minorities, orchestrated from afar, and the decline of national morale in populations indoctrinated by education systems. Infiltrated by the false prophets of a 'peace' that is synonymous with pusillanimity and abject surrender — all this adds up to a condition where the nations of the South Pacific will enter a new helotage, which they will have invited and probably deserve.

Of course, between these two extreme scenarios — perhaps equally improbable — lies a spectrum of derivatory options, ranging from the modestly optimistic to the fairly risky, but in varying degrees capable of serving the security interests of the South Pacific region.

Whatever the eventual outcome may be of the interplay of forces currently observable in the South Pacific, the ultimate determinant — as always and everywhere — will be the skill and clarity of vision of the policy makes of Pacific states, and nowhere more importantly than in Australia and New Zealand. The leaders of these states, no matter of what political persuasion, would do well to pause in the midst of their ritualistic rhetorical outpourings to heed the acute observation of one of the greatest analysts of international affairs in this century:

> 'Diplomacy, one might say, is the brains of national power, as national morale is its soul. If its vision is blurred, its judgement defective, and its determination feeble, all the advantages of geographical location, of self-sufficiency in food, raw materials, and industrial production, or military preparedness, of size and quality of population will in the long run avail a national little."
>
> (Hans J. Morgenthau *Politics Among Nations)*

NOTES

1. It is well known that Soviet fishing, commercial and oceanographic vessels are equipped to carry out electronic surveillance of communications facilities of other powers. Further a measure of interchangability exists between personnel on these carriers and the Soviet navy proper. Again, though hither to not definitively detected, it is highly likely that Soviet submarines carry out familiarization patrols in South Pacific waters, particularly since the acquisition of forward base facilities in Cam Ranh Bay makes for shorter periods at sea without the necessity of surfacing.
2. Finnish, Polish and Swedish initiatives have taken place since the early sixties. A rather grandiose UN attempt in 1985, involving twenty-one nations debated the possible creation of NFZs in Europe, Africa, the Middle East and South Asia, but could not arrive at even tentative agreement.
3. These Protocols in the Treaty of Rarotonga are aimed specifically at existing nuclear powers.

   Protocol I requires nuclear powers with territories within or near the zone to refraint from manufacturing, stationing and testing any nuclear device in those territories. This clearly is aimed mainly at France, though the UK and USA are also nominated.

   Protocol II invites all five nuclear powers to undertake not to use or threaten to use any nuclear device against parties to the Treaty or any territory in the Zone that is the responsibility of a signatory to Protocol I.

   Protocol III requires signatories not to test nuclear explosive devices within the SPNFZ.

   The USSR and the PRC have hastened to sign the Protocols albeit with explicit and implicit reservations on adherence being contingent on the acquiescence of other nuclear powers. The USA, UK and of course France have so far declined the invitation to sign the Protocols.

4. Vanuatu is something of a maverick in the community of Pacific states. It has unilaterally declared itself nuclear free, flirts with the USSR, Libya and Cuba, and regards the Treaty of Rarotonga as not going nearly far enough. Tonga on the other hand is ultra-conservative, and regards the Treaty as subversive of Western influence and protection in the region. Indeed, Crown Prince Tupou'toa is reported to have said that warships of friendly nations were welcome to visit Tonga particularly if they were nuclear armed!
5. Published ian 1984, the report of the National Radiation Laboratory, which has been in the business of monitoring radioactive fallout since 1949, stated that French Polynesians received *lower* doses of radiation from all sources, including fallout, than the world average, and therefore were less unlikely to acquire diseases related to such exposure.
6. Examples are associations of Physicians, Scientists and even Architects against nuclear arms. At a more proletarian level — but with university trained leadership — is the Pacific Peoples' Anti-Nuclear Action Committee (PPANAC) set up in 1980 in Auckland to articulate the concerns of the large Polynesian population now resident in New Zealand.
7. One reliable source puts the figures in the case of Australian trade alone at 5000 sailings a year to and from Japanese and other East Asian ports, and 800 to the Americas.
   (Brig. F.W. Speed, 'Defence in the South West Pacific', *The Army Quarterly and Defence Journal*. Vol. 116 (3), July 1986, p.309.
8. Adm. Jose J. Merino, 'Trouble in the Southern Pacific, *Proceedings*, U.S. Naval Institute, December, 1986, p.81.

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HMPNGS SEEADLER departing HMAS Stirling on her delivery voyage to Papua New Guinea on November 30, 1988. SEEADLER is the third Pacific patrol boat to be delivered to Papua New Guinea under Australia's Defence Cooperation programme.

Photo: LSPH W. McBride, RAN

AIR DEFENCE OF MERCHANT SHIPS

by

Dr James A. Boutilier

INTRODUCTION

At first glance the answer to the question of providing aerial protection for merchant shipping appears straightforward; allocate aircraft to patrol Sea Lanes of Communications (SLOCs). While this might have been a suitable solution seventy-five years ago, today's maritime environment is much more complex and unpredictable. As the number and capability of sea-going weapon systems increase and as nations like Australia and Japan remain acutely dependent on merchant shipping for their survival, it is appropriate to re-examine the ways in which airpower can be employed to defend that shipping. In the first instance an analysis of world routing maps suggests that upwards of ninety per cent of global shipping passes within easy range of land-based aircraft. But it is not merely a case of planes attacking vessels as they have done in the Persian Gulf Tanker War. Airpower in the form of fighters, Airborne Early Warning (AEW) aircraft, Vertical/Short Take Off and Landing (V/STOL) machines, and helicopters must be employed to defend shipping from incoming air to surface (AS) and surface to surface (SS) missiles, from surface and submarine attack,, from attack by land and sea-based aircraft, and from mines sewn in a variety of ways. These are demanding tasks, particularly at a time when the lessons of the past are being forgotten, when the peacetime and wartime organization of merchant shipping enjoys a low priority, and when threats to merchant ships are multiplying. The object of this paper is to examine the ways in which airpower can be used to combat those threats.

BACKGROUND

What is the nature and extent of the problem? It is self-evident — yet bears repeating nonetheless — that the global economy is overwhelmingly dependent on shipping. Over 99.5 per cent of the world's trade is still carried by ships.[1] Seaborne traffic is the least expensive way of transporting large quantities of goods over great distances.[2] Compare, for example, the lift capabilities of the American C-5A Galaxy, one of the world's largest cargo planes, and the average merchant ship. The latter could carry the equivalent of 300 Galaxy cargoes.[3]

Currently, 400,000,000 gross tons of shipping appear on the world registers. Put another way that represents approximately 60,000 vessels of all sorts and sizes. At any one time, 15,000 of those ships are likely to be at sea. The magnitude of these numbers is more easily comprehended if we think of the fact that 800 ships per day pass through the Dover Straits.[4]

Most national economies are heavily reliant on merchant shipping. More than 70 per cent of American trade goes by sea while the nation is obliged to import more than 90 per cent of such vital materials as manganese and chrome.[5] Japanese figures tell a tale of even greater dependency. Ninety-five per cent of Japan's crude oil, iron ore, copper, tin, and soy bean comes from overseas while 100 per cent of Japan's aluminium, nickel, coal, wool and cotton is introduced by ship.[6] If we look at crude oil imports alone, we see that it would take over 1600 tankers, with a mean dead weight capacity of 150,000 tons, to meet Japan's annual needs.[7] Fortunately for Japan (leaving aside the question of protection for a moment) her merchant fleet is huge. At the opposite end of the scale is Australia with only 100 merchant ships, a number just sufficient to meet her local and overseas needs. As it is, only 3 per cent of Australian export cargoes travel in Australian bottoms and thus the nation is acutely vulnerable to dislocations in world shipping.[8]

Wartime shipping needs are likely to be immense. If combat on the central front in Europe is of any duration it is likely that NATO will call upon upwards of 10,000 ships to sustain itself.[9] One estimate suggests that there will be a requirement for 6000 round-trip journeys between North America and Europe in the first thirty days of fighting. What is more, the ships involved in such exercises are certain to be much bigger and more attractive targets than their World War I and II counterparts. Individual supertankers today can carry as much oil as an entire convoy forty-five years ago.[10] Aerial protection of these resources is certain to be a vital (and arguably the paramount) ingredient in an allied victory.

WORLD WARS I AND II

The experience of two World Wars suggests unequivocally that the aerial protection of merchant shipping was and is supremely important. The allies did not initiate convoys until fairly late in World War I. The Germans declared unrestricted submarine warfare on 1 February 1917 over much of the Mediterranean and a vast area surrounding the British Isles. By April, the merchant shipping situation was desperate, one ship in four steaming into oblivion. The following month the convoy system was adopted and was fully operational by August.[11]

Convoying is essentially defensive but this reality did not accord with the views of many Royal Navy officers who favoured the dash and elan of hunter-killer operations. While the latter may well have been congruent with RN traditions, they proved totally useless in terms of destroying U-boats. There were, for instance, 50 destroyers, 50 torpedo boats, and some 500 auxiliary patrol vessels engaged in offensive operations against U-boats in the Bristol and English Channels in the early part of 1917, but while U-boats sank 100 ships of 500 tons and above during the period February to April, the British failed to sink a single submarine.[12] Indeed, as the Admiralty's *Naval Staff History* of the Second World War concluded, "the numerous hunting forces accounted altogether for [only] one U-boat [in the balance of the 1914-1918 war] and made no contribution to the defence of shipping".[13]

The same thing could certainly not be said about airpower. While the allied inventory of maritime airpower was motley (consisting as it did of aircraft, seaplanes, airships, and kite balloons; the last mentioned being towed astern of ships in a convoy) and lacking in the ability to destroy U-boats, it was mightily effective in protecting merchant shipping. During 1918 maritime airpower was engaged in over 7000 sorties in defence of convoys and only three ships were lost out of the tens of thousands convoyed. The history of the French coal trade convoys lends further support to these statistics. Out of the 39,352 vessels that sailed across the English Channel only 53 (0.14 per cent) were lost when aircraft were present.

The fact that airpower had rendered convoys "virtually immune from successful attack" was soon forgotten.[14] Most navalists and politicians in the interwar years succumbed to a fatal mixture of naivete and illogical thought. Although convoying had proven the most effective means to ensure safe passage *and* to destroy U-boats its value was largely overlooked. The Royal Air Force not only controlled all maritime airpower until 1937, but it was mesmerized by the apparent effectiveness of bombing. Thus all long range aircraft were to be employed bombing European targets rather than protecting shipping. A further consequence of the bombing mentality was the argument (resonant of those in the nuclear age) that the destructive power of bombs would render future wars short. If, however, that were not the case, then there was no need for haste since prolonged conflict would give the combatants enough time to make up for their military deficiencies.[15]

For its part the Admiralty was forced to wrestle with pacifism and parsimony in the form of naval arms limitations and Treasury cheese-paring. Compounding the RN's unpreparedness was the mistaken belief that ASDIC had neutralized the submarine menace. Although 37 per cent of U-boat attacks in Home Waters in the last nine months of World War I were on the surface, where ASDIC was ineffective, the Admiralty managed to convince itself by 1937 that submarine attack was a thing of the past.[16] Furthermore, the RN had a fixation of its own: battleships. Despite the impending air and submarine revolutions, naval planners were still mesmerized by the battlefleet concept. As Roskill notes, the Fleet Air Arm, like the submarine and convoy escort, remained a poor relation of the big ship navy in the 1930s.[17]

The same sense of unreality prevailed in the merchant shipping realm. Ill-founded anti-convoy arguments began to re-surface in the interwar period and the Admiralty lacked the nerve needed to persuade ship owners as to the importance of peacetime convoy exercises. It followed, therefore, that there were no slow mercantile convoy exercises against submarines or air attack between 1919 and 1939.[18] There was also a good deal of uncertainty in official circles about equipping merchant men with defensive weaponry. Ship-owners bridled at the cost of installing weapons and questioned whether the legal status of their vessels would be altered to their detriment if arming took place. The Admiralty allowed itself to be drawn into fitting merchantmen with anti-aircraft guns even though a committee on anti-aircraft fire concluded that "the problem of the protection of merchant shipping from air attack [was] unsolved. Improvised methods of arming merchant ships with obsolete equipment are absolutely valueless".[19] In the final analysis, it seems "that anti-aircraft guns were provided . . . for three reasons — because they were available, because of their morale effect, and because it was unthinkable that no attempt should be made to defend each individual ship

against aircraft attack".[20] As it happened a defensive effect was achieved by inadvertence. Anti-aircraft weapons were almost worthless against air attack when merchant men sailed as independents, but the barrage effect of merchant vessels in a convoy was considerable.

It comes as no surprise that the British were almost completely unprepared to provide adequate protection for convoys on the eve of World War II. While their level of imports had risen since 1914, their merchant fleet had declined in size.[21] Nevertheless, there were still likely to be 2500 British ships at sea at any one time. The Admiralty had about 150 ASDIC-equipped destroyers but half of these were World War I vessels in reserve and what ships there were were intended primarily for screening the Home Fleet. Air escort for convoys was in the words of one celebrated U-boat hunter, Captain Donald Macintyre, "virtually non-existent".[22] RAF Coastal Command had a few squadrons of twin-engined Ansons with a range of 510 miles and two squadrons of Sunderland flying boats with a range of 850 miles. However, there were no aircraft within the command designed or aircrews trained for anti-submarine work. North Sea reconnaissance against surface raiders rather than convoy protection as Coastal Command's primary concern.[23]

Confused priorities and a lack of technical capability prevented the allies from coming to grips with the U-boat threat in the North Atlantic for more than three years. The RAF was committed to a policy of strategic bombing and argued that the production of bombers had to take precedence over the production of Very Long Range (VLR) anti-submarine aircraft for Coastal Command. Even if such aircraft had been available they would have contributed little since Coastal Command was committed to hunting for raiders: all this despite the fact that not a single raider was ever intercepted.[24] On the naval side, the RN was still seduced by the mystique of offensive operations. Convoying was perceived to be dull and unspectacular work. The lessons of World War I were conveniently forgotten and huge amounts of energy were expended on fruitless hunter-killer sweeps.

What few aircraft there were lacked the range, detection equipment, and destructive capability to locate and destroy U-boats. Technical breakthroughs began to occur in 1942 when aircraft equipped with improved surface scanning radar and Torpex filled, shallow-set, aerial depth charges drove U-boats deeper and deeper into the mid-Atlantic. There, south of Iceland and Greenland, was the infamous Black Pit, an area of ocean beyond the normal range of allied aircraft. Only two things could solve the problem of U-boats operating with impunity in the Black Pit, the provision of escort carriers and VLR aircraft.[25]

In March 1941 the British Prime Minister, Sir Winston Churchill, ordered that priority be given to equipping merchant ships with catapults from which they could launch fighter aircraft against Focke-Wulf 200 and other enemy bombers attacking British shipping.[26] The result was the so-called CAM ship. There were never very many of them but ships like the *Empire Lawrence*, that sailed with the Russian convoy PQ16 in May 1942, did yeoman service, its lone Hawker Hurricane breaking up a German aerial attack before being shot down by overzealous merchant gunners.[27]

But what was needed against the mass of German aircraft deployed in northern Norway was organic airpower on a large scale, the sort of convoy protection that only carriers could provide. The allies had conventional carriers but most of them were deployed in the Mediterranean and the Pacific. The escort carrier was the answer. The first of these, HMS *Audacity* was, ironically, a converted ex-German blockade runner. Escort carriers were inexpensive, unadorned vessels averaging 10-12,000 tons and carrying roughly thirty fighters. By the end of the war there were forty-one escort carriers in service. It was a Swordfish bi-plane from HMS *Archer* in May 1943 that had the distinction of being the first escort carrier aircraft to sink a German submarine, U-752. Interestingly enough the Swordfish employed an anti-tank rocket to hole the U-boat's pressure hull, thereby inaugurating the air to surface missile age in anti-submarine warfare.[28]

There were sufficient VLR aircraft available by the autumn of 1942 to provide aerial protection for merchant men in the "Black Pit" but confused priorities meant that suitable aircraft were allocated to other commands. Up to December 1942 there was only one squadron of six aircraft capable of anti-submarine operations in mid-Atlantic.[29] Although the figures vary from source to source it appears that there were approximately seventeen such aircraft by February 1943 and almost fifty by May of the same year. It was in that month that the U-boat war reached its climax and Admiral Doenitz withdrew his wolf packs from the North Atlantic temporarily.

An analysis of the Battle of the Atlantic demonstrates the supreme importance of providing aerial protection for convoys. Even during the first two years of the war when aircraft lacked the ability to detect surfaced

U-boats electronically or to destroy them once they had been found no ship was lost in a convoy enjoying air escort. The efficacy of escort and support, as opposed to patrol (the aerial equivalent of sweeps by hunter-killer surface vessels), is revealed by the fact that one U-boat kill on patrol absorbed 4020 patrol hours while one kill on escort and support entailed only 160 hours in the air. Similarly, the number of maritime aircraft lost favoured convoy escort overwhelmingly. The number of aircraft lost per U-boat destroyed in transit area patrols was 7.66 times as great as the number lost in escort and support.[30]

The overall statistics for the war are particularly telling. Of 2,353 merchant ships sunk between 1939 and 1945 in Home Waters and the Atlantic (including the Arctic, Caribbean and Gulf of Mexico) only 20 (1 per cent) was sunk when ships in convoy enjoyed surface as well as air escort. The figure for convoys with surface escort alone is 691 (29 per cent). "The loss rate for ships in convoy with air escort," the Admiralty postwar analysis concluded self-evidently, "was infinitesimal".[31]

If the aerial protection of merchant shipping conferred virtual immunity on convoys the reverse was true as the Japanese experience in World War II revealed. While so much of Japan's southeast Asian strategy was predicated on acquiring access to supplies of oil, rubber, tin, and other war materials, almost no thought was devoted to the problem of how to transport those materials back to the Japanese home islands. Like their RN counterparts, officers in the Imperial Japanese Navy (IJN) were blinded by the mystique of the offensive. Although the Japanese began the war with more than 2500 merchant ships (6,337,000 gross tons), there was no department responsible for the control and protection of commercial shipping.[32] The IJN was fixated with offensive, Combined Fleet, operations and not with mundane ASW activities. What is particularly ironic is that the defeat of Japan was to a considerable degree the product of inadvertence. The Americans never developed a coherent anti-shipping campaign and yet 5 per cent of the Allied naval and air effort in the Pacific theatre resulted in the fatal immobilization of the shipping on which the Japanese war effort depended.[33]

The Japanese adopted convoying relatively late in the war and the forces allocated to convoy protection were "ill-equipped, untrained and unco-ordinated."[34] Even more fundamental for our purposes was the fact that the Japanese consistently failed to employ aircraft to protect their convoys. Under the circumstances there could be only one outcome, the near total destruction of Japan's merchant fleet. Whereas the Allied loss rate in the Atlantic theatre was 0.2 per cent, or one ship in 500, the Japanese loss rate was catastrophic. Of 10,000,000 gross registered tons the Japanese lost 8,900,000 g.r.t.[35]

THE POSTWAR PERIOD: 1945-1975

The post-World War II period was characterized by a considerable degree of strategic uncertainty about the value of naval forces, an overall decline in their numbers, and a rapid rate of technological change. The advent of the atomic bomb and American nuclear experiments at Bikini Atoll in 1946 suggested that capital ships were highly vulnerable and that convoys in the future would need to be widely dispersed. There were some who wondered whether navies were likely to play any role at all in short-lived atomic confrontations. This uncertainty was captured by the British White Paper in 1957 which announced that the role of naval forces in total war was problematic.[36] Compounding the problem for navalists in the United States was the postwar debate as to whether or not the USAF could do the job better than the navy. Was there any need for a navy when B-36 bombers could deliver atomic bombs anywhere in the world? If bombers could do the job and if wars were to be measured in days what was the purpose of navies, convoys, and maritime airpower?[37]

Even if this debate had not taken place the realities of postwar economics were sufficient to ensure that most of the world's navies shrank following the cessation of hostilities. The principal victims, in the long haul, were aircraft carriers and seaborne fixed wing aircraft. Even the United States Navy was not immune to these developments. In April 1949 the US Congress authorized the laying down of the *United States*, a 75,000 ton aircraft carrier. Five days after the keel was set in place the project was cancelled, the victim of inter-service rivalry.[38] The Korean War came to the USN's rescue, once again highlighting the versatility and self-sustaining strengths of aircraft carriers. The turnaround occasioned by the war is illustrated by the fact that in 1951 the USS *Forrestal*, an 1100 foot, 78,000 ton carrier was authorized, thereby setting in train a building programme which would bring American carrier fortunes to their zenith in 1962 with seven attack, three Midway, and eight modernized Essex-class carriers.[39]

The principal developments in the technical realm were dramatic changes in submarine design, the marriage of helicopter and small ship, and the appearance of maritime missile systems. By 1950 the USSR was reported to

have 300 submarines and anti-submarine warfare (ASW) became the principal concern of NATO navies. At the same time helicopter technology had improved sufficiently that helicopters began to assume a greater and greater ASW role. The first Royal Navy ASW helicopter squadron (845) with variable depth or "dunking" sonar was formed in 1954 and the first ship/helicopter combination in the RN became operational in 1965 when HMS *Leander* put to sea with a Wasp helicopter on board.[40]

In Winton's estimation the seagoing helicopter "proved a life line for the [Royal] Navy".[41] The 1957 White Paper had made no mention of the use of Fighter Command in providing aerial protection for coastal merchant shipping and the CVA 01 aircraft carrier project, authorized by parliament in the early 1960s, was in danger of collapse. Like the Canadians in 1969 and the Australians in 1982, the British were finding carriers too expensive to build and maintain. Like their colleagues in the RCN and RAN, aircraft carrier proponents in the RN allowed themselves to be painted into a corner, to concede ground to their critics to the point where the true strengths of aircraft carriers were lost sight of. The Admiralty committed "a major strategic blunder" by arguing that the real value of carriers was conducting limited operations east of Suez.[42] The government of the day cut the ground out from under the RN by announcing Britain's withdrawal from east of Suez. There were still three front line carriers available but they were expected to be phased out in the 1970s while land-based aircraft and seagoing helicopters made up for the lack of a Fleet Air Arm.

While these changes were occurring the verities of convoy operations and of aerial protection for merchant men were being forgotten; notwithstanding the fact that the maritime environment was becoming more dangerous and unpredictable. In the early 1960s the Russians began to equip their burgeoning nuclear submarine fleet with sea-launched cruise missiles (SLCMs).[43] They also began to build up their long range naval airforce, consisting primarily of TU-16 Badger bombers, with a range of 2000 miles and standoff weapons, the TU-95 four-engined turbo-prop Bears. These aircraft were capable of operating far out to sea and the advent of airborne, surface, and sub-surface missile systems highlighted the need for increased AEW, ASW, and strike aircraft at a time when escort carriers were a thing of the past and the days of fleet carriers were numbered.

Even the USN was in trouble. In 1965 the Secretary of Defense, Robert McNamara, decided to let the ranks of American carriers decline without replacement. But hardly had the decision been made than those same carriers became more deeply involved in the Vietnam War. By 1967 McNamara had changed his mind and approved the construction of three nuclear-powered Nimitz-class supercarriers.[44] It was in that same year that the naval community was alarmed by news that the Egyptians, employing fast Soviet Komar missile boats, had knocked out the Israeli destroyer *Elath*. Once again critics of carriers asked whether these huge vessels were merely sitting ducks, costly invitations to attack. The British were able to deflect such concerns by an elaborate sleight of hand, the through deck cruiser. Arguing that this aircraft carrier was not a carrier but a command cruiser, they fought off bitter attacks by the RAF and convinced parliament in 1973 to authorize HMS *Invincible*.[45] A particularly important feature of this 16,000 ton vessel was its inventory of five Sea Harriers, 650 knot fighter/reconnaissance/strike V/STOL aircraft. Not only did Sea Harriers bring fixed wing aircraft back to sea but they opened the way for a range of fairly novel deployments. The other frontline aircraft carried aboard *Invincible* were Sea King helicopters. These were all-weather, hunter-killer, anti-submarine machines with radar, sonar, homing torpedoes, and/or depth charges.

Invincible gave the RN a further lease on life in terms of organic air power but the basic problem was that Britain's ageing fleet of carriers and America's carrier battle groups (CVBG) were not intended primarily as convoy protection systems. The former were expected to operate in Home Waters in the company of shore-based aircraft while the latter were designed to carry the battle into the enemy camp with forward deployments that would allow carrier resources to neutralize efforts to turn the flank of the central front or to destroy Soviet ballistic missile submarines.[46] There was a decided dearth of evidence in the postwar period about the value of air power for protecting merchant shipping. However, air power came to be used in somewhat unexpected ways in the mid-1970s when American RH-53D Sea Stallion helicopters afforded protection to merchant vessels by sweeping Haiphong harbour and the approaches to the Suez Canal for mines.[47]

ARAPAHO and SCS

Despite the proven value of World War II escort carriers in terms of providing convoy air cover the concept of the "cheap" carrier has never enjoyed much currency in the post-

war period. There have, however, been periodic attempts to revive the concept in the form of Project Arapaho, the Sea Control Ship or SCS, and the CVV or small aircraft carrier.[48] Writing in the *Military Review* in 1988, Major Scott Conrad described the Arapaho concept succinctly. Arapaho "is an exciting but virtually ignored Navy concept to quickly (within a matter of hours) outfit idle container ships with fully operational aviation facilities. It calls for modifying portions of the cargo deck with a readily installable flight deck and containers sized to commercial standards".[49] The host ship would generally retain 70 per cent of its cargo-carrying capacity while the remainder would be taken up with containers serving as hangars for helicopters or VSTOL aircraft, command, control, and communications (C^3) spaces, fuel storage facilities, and so forth. The United States Navy conducted comprehensive sea trials of an Arapaho vessel in October 1982 and these trials were reported to be successful. For some reason, though, the concept does not appear to have been developed beyond this point.[50]

Similarly, the SCS concept was short-lived. During his period as Chief of Naval Operations, Admiral Elmo Zumwalt (1970-1974), advanced the idea of a high-low mix of shipping for the USN. At the "low" end of the scale were to be relatively inexpensive SCS, mini-carriers or escort carriers by another name. The vessels Zumwalt envisioned were to be roughly 17,000 ton, 600 foot, gas turbine ships carrying 14 SH-3 helicopter and 3 Harrier V/STOL aircraft. Each SCS would cost about $100 million, or one-eighth the cost of a nuclear powered carrier.[51] What made Arapaho or SCS-style ships so valuable was the fact that they were capable of providing merchant men with aerial surveillance. As Klippert notes, aviation is vital to anti-aircraft warfare (AAW), AEW, and electronic surveillance (ESM) because sensors are limited to line of sight.[52] Sensors on the masts of surface vessels cannot hope to pick up incoming sea skimmers until they are in the terminal stages of their flight paths. Airborne platforms enable convoys not only to see over the horizon but to vector defensive weapons as distant enemy targets. The US Congress, however, was not stirred by these arguments and in 1974 it deleted all funding for the SCS programme.

Congress also considered during its 1978 debates the possibility of building CVVs. These would have been 25-40,000 ton vessels operating conventional and V/STOL aircraft in order to guard SLOCs in the Atlantic and the Pacific. However, as the debate unfolded CVV proponents gradually increased the size of their ship to the point where real or imaginary cost effectiveness arguments were undercut.[53]

AIR LESSONS OF THE FALKLANDS

In much the same way that the Russo-Japanese War (1904-1905) was the first modern steam and steel naval war so the Falklands war in 1982 was the first large-scale maritime testing ground for missile-electronic combat. Like the Russo-Japanese war the Falklands was productive of a substantial number of "lessons", many of them old truths re-learned or redefined. First and foremost of these was the need for organic air power.[54] While there are those who will argue that the Falklands War as aberrational in maritime terms and that navies like the RN are almost certain to conduct their business in years to come under an umbrella of land-based air cover, there are others who will argue persuasively that such air cover is sorely overrated. Australian defence policy, for example, is predicated on the availability of such air power but the location of airfields, the availability and capability of aircraft, and the problem of transit times make it doubtful whether the RAAF will ever be able to perform a significant maritime air defence role.[55]

The British would have lost the Falklands War without organic air power. As it was they were pitifully short of planes. The *Ark Royal* with its high performance Phantoms and AEW Gannets had been laid up in 1978 and the RN lacked the ideal mix of vessels particularly if, in the parlance of the day, it had to operate "out of theatre." In Braybrook's estimation "the great success story of the air war" in the South Atlantic was the V/STOL Sea Harrier.[56] Like the Americans today, who lack sufficient air wings to man all of their carriers, the British did not have sufficient aircraft for the task (p.280). Twenty-eight Sea Harriers were sent to the South Atlantic while four were kept back for pilot training in the United Kingdom. A further fourteen RAF GR3 Harriers were hastily modified for maritime service but they lacked the Sea Harrier's intercept radar and thus had to be confined to ground attack roles.

The carriers *Hermes* and *Invincible* normally carried five Sea Harriers each but at one stage the former had 21 fixed wing aircraft on board. The ski-jump decks on these vessels enabled the Harriers to take off with heavy payloads but prevented the elderly Gannets from being used if they could have been pressed into service for AEW. What AEW there was was largely makeshift. Sea King helicopters were fitted with search radar but most of the AEW appears to have been achieved with Harrier pilots on picket station, 200 n.m. from the fleet,

sighting enemy aircraft visually. While this system worked remarkably well under the circumstances the lack of wide-ranging AEW was a major liability for the British armada.[57]

On the other hand the amazing endurance, versatility, and reliability of British aircraft was a source of tremendous strength. Sea King helicopters served in a vast number of roles, frequently in appalling flying conditions (visibility beneath 1/8 n.m. and ceiling below 100 feet), and yet achieved very high degrees of availability. Similarly, despite almost 1900 sorties, the Harriers had an 80 per cent availability rate. Their AIM 9L Sidewinder missiles achieved an 88 per cent success rate, knocking out 24 Argentinian aircraft. Robustness in a harsh environment rather than sophistication appears to have been one of the more important lessons of the war.[58]

Of particular relevance to the issue of the aerial protection of merchant ships was the role played by commercial vessels in the conflict. A total of 56 merchant men, ranging from the 67,107 GRT liner *Queen Elizabeth* to the 5463 GRT Ro-Ro vessel *Elk*, were pressed into service and nine of them were fitted with helicopter landing facilities.[59] One ship in particular, the 14,946 GRT Cunard Ro-Ro cargo ship *Atlantic Conveyor*, is of interest because she was fitted with a 50 x 80 foot operating pad forward from which she flew the Harriers (as well as Chinook and Wessex helicopters) that she had transported to the South Atlantic in make-shift "hangars" between her containers. Like the *Sheffield*, the *Atlantic Conveyor* was the victim of an Argentinian Exocet missile. The loss of these vessels gave rise to a not altogether justified Exocet panic.[60] Cassandra's maintained that the day of the surface ship was at an end. More important for our purposes was the fact that an Arapaho-style configuration was possible if helicopters and VSTOL aircraft were available. Further the loss of these ships highlighted the need for Close In Weapons Systems (CIWS) of the Gatling gun/chaff variety since no convoy is ever likely to enjoy one hundred per cent aerial protection from incoming missiles.

THE TANKER WAR

The so-called Tanker War in the Persian Gulf is the latest illustration of the need for aerial protection of merchant shipping although the results are not as categorical as air exponents might have liked. The Tanker War was, in the words of one commentator, "a mere sideshow" to the prolonged and bloody Iran-Iraq War (1980-1988).[61] At the beginning of the Iran-Iraq conflict the Iranian airforce was much more powerful than its Iraqi counterpart but politically motivated purges and a lack of spare parts contributed to the steady decline in the effectiveness of the Iranian airforce.[52] By way of contrast, the Iraqi airforce grew in size and confidence over the years, embarking on the Tanker War in 1981 in a campaign of "economic attrition and political intimidation".[63] The Iraqi's continued their attacks on Iranian shipping for three years without Iranian response. However, in May 1984 Iran began to respond though its *modus operandi* was different. Whereas almost all of Iraq's targets (75 per cent of which have been tankers or product carriers) were hit by aircraft missiles (mostly Exocets), the Iranians, lacking suitable anti-ship missiles, attacked with frigate gunfire, helicopters, land-based missiles and rocket propelled grenades from high speed surface craft.[64]

The penultimate year of the war provides us with a number of useful examples of air power at work in the defence of merchant shipping. On 17 May 1988 an Iraqi missile struck the USS *Stark* FFG-31. Leaving aside the thorny issue of rules of engagement, the attack on the *Stark* revealed how vulnerable even a warship with a complete suite of radar and CIWS can be to incoming missiles when the lack of effective AEW gives the crew only 120 seconds to react.[65] Later the same year (21 September) US frigate-based MH-6 Army Special Operations helicopters attacked and captured an Iranian land craft, the *Iran Air*, laying mines in one of the merchant shipping seaways. Shortly thereafter Saudi fighter planes and naval forces drove off sixty Iranian speedboats while on 8 October MH-6 helicopters from an American frigate attacked four Iranian speedboats.

It is hard to assess the overall effectiveness of this sort of air cover since O'Rourke's calculations suggest that only one or two per cent of Gulf shipping has ever come under attack and many of the attacks inflicted relatively minor damage.[66] The Tanker War was as much a political as a military exercise, and had it been prosecuted more aggressively by both sides and had American involvement extended over a longer period the relationship between aerial protection and successful passage might have been more clearly established.

THE PROBLEM

The aerial protection of merchant shipping in the foreseeable future is likely to be determined by the unfolding of naval strategy on a grand scale. Currently NATO's primary maritime objective is the defence of North

Atlantic SLOCs in time of war. The principal threat to those SLOCs is seen to be Soviet attack and cruise missile submarines as well as land-based long-range naval aviation.[67] It follows from this threat assessment that these forces need to be bottled up, to be prevented from reaching the North Atlantic. The resulting Forward Strategy developed by the USN in the 1980s called for the creation of a barrier across the Greenland-Iceland-United Kingdom (GIUK) gap and aggressive operations in the Norwegian Sea designed to destroy Soviet surface forces and neutralize Russian SSBNs in their White Sea redoubt. The barrier would consist of SOSUS sea floor acoustic monitoring devices, long-range anti-submarine patrols by RN Nimrod and USN P-3C Orion aircraft, and American submarine patrols. The advance into the Norwegian Sea in times of hostility would be carried out by American CVBGs with NATO naval support.

This "best defence is offense" argument has been the subject of intense debate recently. In the first place the Forward Strategy is predicated on the assumption the CVBGs can be moved into position with sufficiently rapidity to intervene in the anticipated manner in times of crisis. As a subset of this concern are anxieties that such a move would be seen as an exercise in provocation rather than in resolution; stimulating confrontation rather than conciliation on the part of the Soviets. A second major concern is that even if the CVBGs were successful in defeating Soviet naval forces in the Norwegian Sea they would not necessarily be able to prevent attacks on NATO SLOCs farther to the south. And if the CVBGs fell victim to Soviet air and sea power the SLOCs would be left almost unguarded.[68]

Overarching these issues is a larger geopolitical reality. As a result of technical changes over the past decade the barrier has been transformed into a bastion. The enhanced sophistication, range, and survivability of Soviet SSBNs like the Deltas and Typhoons (the latter configured for under-ice operations) with their SS-N-20s (with a range of 8300 km) mean that there is less and less need for the Russians to move into the Atlantic. Far from preventing the Russians from getting out, the problem, increasingly, will be how NATO can get into the Norwegian Sea. And if NATO does get in, at what point might the nuclear threshold be crossed. No one knows how many SSBNs the Soviets would be prepared to lose before conventional conflict escalated to all out nuclear war.[69] If that threshold were crossed the whole question of SLOC security and the aerial protection of merchant shipping might very well become academic.

The same issues obtain to a large degree in the Northwest Pacific in terms of the barrier/bastion reversal and the escalatory dynamic of the Forward Strategy. A significant difference between the North Atlantic and the North Pacific, however, is the likely absence of major wartime convoys in the latter. Nevertheless the two oceans are linked intimately by virtue of a corollary of the Forward Strategy, namely, horizontal escalation.[70] The horizontal escalation concept calls for the major diversion of Soviet military might from the Central front by the opening up of a second theatre of conflict in the North Pacific. Recognition of this reality and concern about the growth of the maritime element of the Japanese Self Defence Force has encouraged the Soviets to continue with the quantitative and qualitative build up of their Pacific Fleet.

The Pacific Fleet is now the largest numerically of the four Soviet fleets and is second only to the Northern Fleet in fire power. At the heart of both fleets are the SSBN forces and the primary role of both fleets is to protect those strategic resources. In the northwest Pacific the Soviets are able to shelter their SSBNs within the Sea of Japan and the Sea of Okhotsk and the island barriers which made exit for them so difficult before now inhibit American egress. A close examination of the Pacific fleet inventory and land-based Soviet naval aviation (SNA) indicates that the Russians have created a formidable force designed to defend SSBN bastions and search out and destroy American CVBGs.[71]

The most significant additions to the Pacific Fleet surface forces in the next decade are likely to be two 65,000 ton Soviet aircraft carriers. The first, the *Tbilist* (previously the *Leonid Brezhnev*) is now fitting out at the Nikolayev shipyard on the Black Sea and is expected to begin sea trials in 1989. Allied intelligence estimates suggest that for the moment the *Tbilisi's* naval aviation capabilities are distinctly limited by Western standards. The lack of catapults and arrestor gear and the presence of an *Invincible*-style ski-jump indicate that the *Tbilisi* is likely to carry upwards of 50 Short Take Off and Vertical Landing (STOVL) (possibly YAK-41s) and 20 ASW/missile targetting helicopters.[72] Several high performance, fixed-wing aircraft are being evaluated now at the Saki naval aviation test centre in the Crimea and it appears as if the Mach 2, SU-27 Flanker is the most likely candidate for a reconfigured *Tbilisi*. However, until such time as Flankers are added to the carrier's inventory she will be no match even for Third World fighters.[73]

The *Tbilisi* is illustrative of a gradual Russian shift away from ASW to surface action and this trend is further reinforced by the deployment of powerful Kivov and Slava-class cruisers with long-range anti-ship missiles. At the same time Pacific Fleet SSNs are being fitted out with SS-N-21s, 1600 n.m. cruise missiles with nuclear (and no doubt later, fuel-air explosive) warheads.[74] These missiles are intended to offset the advantage the Americans have enjoyed since 1984 with their Tomahawk SLCM. In addition, the Soviets have been installing SS-N-12 anti-ship cruise missiles on their 13 Echo II class boats and introducing Oscar class SSGNs to their anti-ship forces.

A 23 per cent increase in the number of SNA aircraft has been reported since 1981 with more and better machines coming into service.[75] While the SNA is still overwhelmingly land-based it is capable of projecting power far out to sea. The most recent addition to the SNA is the Blackjack which has a 4000 n.m. combat radius, a supersonic dash speed of Mach 2, electronic warfare (EW) and electronic intelligence (ELINT) capability, and 12 stand-off cruise missiles. Thus Blackjack has a substantially greater range than the swinging TU-76 Backfire and carries six times the number of missiles, an inventory sufficient to provide the sort of saturation needed to defeat CVBG defences.[76] De Cunha reckons that Pacific Fleet SNA is likely to have thirty Blackjacks by the mid-1990s and that they will be in the van of some 200 missile-equipped aircraft, including Backfires, TU-95 Bears, and TU-16 Badgers, directed primarily against American CVBGs beyond Tomahawk range.

Bears and Badgers come in a wide variety of classes and modifications but their primary task is reconnaissance, real time monitoring, and ASW. Soviet offensive policy calls for the orchestration of combined arms in a massive response designed to overwhelm opponents. As a corollary the Russians have organized attack and reconnaissance functions in depth. Thus the TU-95 Bears, with operational ranges in excess of 4000 n.m., constitute the outer reconnaissance tier with ELINT, COMINT and missile control capability.[77] Bears also have their own anti-ship missiles (SS-N-12s and SS-N-19s). Complementing the Bears are the intermediate range 2000 n.m. Badgers and the short range 1000 n.m. BE-12 Mail flying boats. The BE-12s are intended to provide surveillance of the Seas of Japan and Okhotsk and assist other Soviet units in the early decapitation of Japanese maritime forces. These Soviet elements, in turn, are reinforced by the presence of IL-76 Mainstay AWACs-style AEW aircraft and RORSAT oceanic surveillance satellites.[78]

Where does this leave merchant shipping? Almost all of the contemporary literature deals with the threat to CVBGs and ignores the issue of merchant shipping. What evidence there is, however, is not particularly reassuring. Hitherto CVBGs have been utilized to project rather than to protect SLOCs. Some would argue that success in the first confers success in the second but this may not be the case. Certainly there is little tradition of CVEGs providing close in convoy support and the loss of CVBGs would leave convoys dangerously exposed to torpedo, SLCM, and airborne anti-ship missile attack. Although the evidence of World Wars I and II is unequivocal there is still far too little attention being paid to the realities of convoying, particularly at a time when bigger ships mean that an enemy must deal with fewer targets and when increasingly specialized ships imply specialized port facilities and thus less room for muddling through.[79] Furthermore, as Williams and others have indicated repeatedly, any future conflict is almost certain to be a "come as you are" war when there will be almost no time to improvise protective systems for convoys.

SOME ANSWERS

All of the above may appear unnecessarily gloomy. Those nations likely to be engaged in conflict with the Soviet Union (if that is, for sake of argument, the opponent) have an impressive inventory of maritime power of their own. The Americans have 12 or 14 or 15 aircraft carriers (depending on the vagaries of presidential and congressional politics during the next decade) with immensely powerful airwings.[80] Complementing this organic air power of F-14 fighters and A-3 AEW aircraft are AWACs Airborne Warning and Control aircraft of the sort that the Americans operate out of Iceland and the Saudis, assisted by the Americans and backed by American F-15s, operate over the Persian Gulf. AWACs are capable of surveying very large areas and tracking multiple targets, but as Sokolsky argues, the loss of a single AWAC can leave a major gap in AEW defenses.[81]

Of equal importance in terms of the provision of aerial protection are long-range maritime patrol aircraft like the Lockheed P-3C Orion. The Orion is the primary ASW aircraft of the USN and of the Australian, Canadian, Japanese and Netherland navies. It has proven to be a highly successful weapon system but of late questions have been raised about the P-3C's survivability in a wartime environment

particularly at a time when it seems likely that submarines may come to be fitted with their own surface to air missile (SAM) systems.[82] Orions and Nimrods are also vulnerable to attack by enemy aircraft and the destruction of enemy aircraft by NATO fighters gives us an idea of the layered effect of aerial protection for merchant shipping; that is to say that the fighters act at one remove protecting the Orions that isolate the submarines that endanger surface vessels.

Since 1981 the Japanese have taken over a larger share of defending the Japanese home islands and providing protection out to 1000 n.m. from their coasts primarily along the Ryukyu chain, the archipelago paralleling some of Japan's main SLOCs.[83] In view of the growth of the SNA and the existence of large numbers of Russian attack submarines in the Northwest Pacific AAW, AEW, and ASW have taken on a new importance for the Japanese Self-Defence Forces, working within the overall framework of American strategy. Over-extended as they are, the Americans are anxious for the Japanese to bear a greater share of the regional defence burden. However, while the maritime element of the JSDF is probably the world's sixth or seventh largest naval force it lacks the ability to provide adequate air cover over its area of responsibility.[84] This year the Japanese announced their intention to acquire a light carrier and quite possibly Russian naval exercises in the Sea of Japan — in which shipping was subject to fierce air attack — was designed to deliver a message to the Japanese Diet. Whatever the case, simulations of a war with the Soviet Union suggest that Japanese SD Forces would be severely worsted and thus the whole question of allied ability to protect merchant shipping in wartime is difficult to answer with assurance.[85]

CONCLUSION

Where does all this leave us? What does twentieth century naval history tell us about the aerial protection of merchant shipping? At the heart of the matter is a perceptual problem. Since the Russo-Japanese War navalists have been captivated by battle ships, aircraft carriers, submarines and maritime missile systems. These weapons are offensive in nature. Convoys are defensive and thus *ipso facto* of a lesser order of importance. And yet global warfare (provided it is of any duration) is by definition maritime. Convoying will be central to any prolonged conflict and the ability of land, sea, and air forces to function will depend upon the successful movement of goods along SLOCs. And yet western armed forces, who are overwhelmingly dependent on commercial shipping for the transport of their men and material, appear to be strangely indifferent to the axioms of convoying.

World War I and II demonstrated unequivocally that aerial protection was the key to successful convoying. The concern of western navies, however, is with offensive operations. No provision has been made for modern equivalents of escort carriers. The Arapaho concept, a sophisticated elaboration of CAM ships, appears to have been shelved, the lessons of the Falklands War notwithstanding. One even hears of plans to patrol SLOCs offensively, an approach totally discredited in both wars. What one needs to do is patrol ships not oceans.

Thus the outlook is not promising. Modern missiles, aircraft, and submarines demand the presence of a wide range of organic airborne capabilities if convoys are to be protected. These capabilities are present in CVBGs but they are going after targets leaving merchant ships without the sort of aerial protection they so richly deserve.

NOTES

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CONVOY OF DEFENDED LANES

by

Vice Admiral J. Blouin,, US Navy (Ret.)

At the 4th International conference on the Security of the Sea Lanes, I made a presentation entitled "Search and rescue: International Co-operation in the Pacific Basin." The conference was informed of various programs that in peacetime are greatly improving the control and safety of commercial shipping, providing knowledge of ships' positions in the oceans of the world. The tremendous advances in techniques for communications and navigation, made possible by improved electronics, computers, satellites etc., give promise that "being lost" will be a thing of the past. In wartime, however, such systems, if operated by the enemy, would increase the threat to all shipping.

The United States gained considerable experience in World War I and World War II in sailing supplies of all kinds across the seas to its forces and its allies. The most notable of those operations were in the Atlantic, where the threat was greatest, and resulted in the development of sophisticated and efficient convoy operations. There were also some successful high speed indepedent ship transits. Early in each war, however, and before the defences were organised, German submarines inflicted great casualties.

Lessons learned the hard way should help us prepare for future conflicts. Here in Australia we can appreciate that the vast areas of the Pacific dwarf those in the Atlantic, greatly increasing logistic problems. For example, the Indian Ocean is more distant from the United States than any other place on the earth. In fact Trincomalee, in Sri Lanka, is approximately equidistant from New York and San Francisco: about 11,500 miles from either. The normal areas of operations in the Persian Gulf and South Asia is about five steaming days away from Diego Garcia and 12 days from Subic Bay. Consequently, logistic support in the Indian Ocean is a problem which is greatly complicated by the vast distances to any major supply point. Extremely limited capacity at seaports and airports in the littoral countries adds to the difficulties involved in their use.

The objective of Protection of Shipping is the safe and timely arrival of shipping at scheduled destinations. To accomplish this, a combination of offensive and defensive operations is required. This could include operations remote from the sea lanes of communication (SLOCs) — such as barriers, strike operations, surveillance — as well as close-in defence. As protection of shipping is a part of the overall sea control operations in an area, the responsibility for protection of shipping rests with the naval commanders.

There are several concepts that appear practical: convey, defended lanes, single sailings, alternate routing. Then, as in the past, the US would expect that its efforts to keep open the SLOCs would be augmented by allied forces. In the Pacific, it is expected that allies would be actively involved but primarily near their own areas. Japan has already accepted the commitment to defend a perimeter 1,000 miles outward from Tokyo; others such as the ROC and ROK are capable of substantial contributions.

There is no need to explain to this group the importance and necessity of maintaining the security of SLOCs in the Pacific in both peace and war. So, what could be the threat? In past SLOC conferences, the Soviet Union was usually identified as the major threat, and Mainland China as a potential threat, especially to the ROC on Taiwan. However, the Persian Gulf experience gives evidence that threats can arise from unanticipated sources. Small countries, revolutionary movements, terrorists, pirates, etc., can obtain sophisticated weapons and cause turmoil in concentrated areas. In this paper the discussion is mainly on the threat that the USSR poses to the main Pacific SLOCs.

Although the Persian Gulf SLOC situation does not translate fully and directly to the Western Pacific-Indian Ocean SLOC problem, some attention to it is relevant. The Persian Gulf is a special case: an enclosed shallow sea where two local belligerents were at war for over seven years, and where the political and strategic cross-currents of several nations have long been involved. It is obvious that US and the USSR have at least some degree of common interest in containing SLOC attacks, even to the point where the Soviets proposed a UN-sponsored naval patrol to restore order

and security to Gulf shipping. The US and the USSR recognised that this is a crucial strategic area to both the Western and Eastern power blocks. It is generally accepted that more than two-thirds of the earth's known oil reserves are contained in the Gulf area and the US determined that it was necessary to defend Western interests there. At one time the US had some 20,000 personnel deployed there in ships and aircraft, and these were augmented to some degree by forces of other nations. These efforts did reduce casualties. The principal threat came from mines, missiles launched from shore or aircraft, and gunfire from small fast gunboats. Affirmative aggressive action probably could have quickly disposed of such threats. However, political considerations necessitated drawing a fine line between deterring the attacks and escalating to war.

It is assumed for this discussion that the primary (but not the only) threat to the East Asian and South Asian SLOCs comes from Soviet submarines, and that these nuclear submarines can cruise the Western Pacific and Indian Oceans. Soviet surface ships and aircraft pose additional threats, particularly in the Western Pacific. Moreover, any study of the protection of the Asian SLOCs must consider the geography of the vast area. The large open ocean area and long ship transits provide challenges to both the protection and interdiction of the SLOC.

In the years since World War II there have been greatly improved capabilities for the detection and tracking of submarines, as well as similar improvements for surveillance of surface ships by aircraft and satellites. Detection is better but the enemy is more numerous and more threatening.

A very dangerous time for all ships about to make an ocean transit is the initial stage. To meet this threat, the US has now established Maritime Defence Zones. Coast Guard units, combined with naval forces both active and reserve, will defend harbours and shipping lanes along the US coasts in time of war. These MDZs are Navy commands, headed by Coast Guard area commanders when activated. The maritime defence zone commands will combine active and reserve units in both the Navy and Coast Guard in missions of mine warfae, counter-mine warfare, in-shore undersea warfare, convoy escort and defence of US port facilities against sabotage, terrorism and accidents. These coastal defence missions are essential to our strategic deployment, sustainment and resupply. The MDZ area of operations includes the navigable waterways, port areas, harbour approaches, and ocean areas from the coastal seaward to 200 miles. Among the MDZ objectives is to ensure the successful departure of military reinforcement and resupply shipping and the safety of maritime cargoes. The threat with which the MDZ must deal includes the entire spectrum of covert and hostile actions that could compromise a port or sink a ship at sea. This includes all types of attacks, military and terrorist. In effect the MDZ establishes defended lanes within its area for all shipping. It seems logical that the development of this concept would be appropriate for our friends in the Western Pacific.

The Pacific ports of the US, however, are several thousands of miles from those in the Far East. The critical importance of the SLOCs between those ports is obvious in peace as well as in war. Virtually all of the raw materials, manufactured goods and military supplies must go by sea. The security of the SLOCs is vital, strategically, to the economic welfare and military logistics support of all nations bordering the Pacific and for this reason the US has organised its forces and assets to provide control and protection of its shipping. There are several options for the protection of ships in the SLOCs: convoy, independent sailings, defended lanes, and offensive operations to ensure control of certain areas.

In the US, convoy comes to mind first because of experience gained in World Wars I and II, primarily in the Atlantic. It is cost-effective in the use of naval assets but has disadvantages because of delays in formation, resulting in port congestion and slower transit speeds. The use of convoys is based on the premise that all but essential military and economic shipping would be curtailed during the conflict. In the past the best and safest way to move slow merchant ships in a hostile environment was by an *adequately escorted* convoy. There is some doubt that future convoys could be provided adequate conventional escorts during the long transit of the Pacific. Planners would like to allocate about seven surface escorts to a six-merchant ship convoy, but how many more for a 50-ship convoy? How many convoys would be at sea simultaneously? Today's merchant ship is larger and faster but submarines are now quieter and faster and carry missiles as well as torpedoes. It does seem that convoys in future conflicts will require expanded escort capability. To assist in convoy protection there are such assets as detectors on the ocean bottom (SOSUS), maritime patrol aircraft,

carrier-based ASW aircraft and helicopters, attack submarines, small helos embarked on the escorts (and possibly on merchant ships as well). Since such ASW resources would be limited it may be necessary to plan even larger convoys in order to concentrate their protective forces. In an expansion of the convey concept, these forces could be deployed to provide protected areas or defended lanes along the convoy's route.

If an anti-shipping campaign did not materialise, the preferred method of ship movement probably would be independent sailings. Independent sailings allow the ship to sail when ready, proceed at the ship's most favourable speed, follow the most direct route and proceed through the offloading process as quickly as its own schedule will allow. Other advantages of an independently sailed ship include the ability to use the ship's top speed as an evasive measure and the possibility that a single ship might pass through enemy surveillance undetected, or if detected, make interception less likely. Limited enemy assets and the large open area of the Pacific could give the advantage to independently sailed ships under some circumstances. Speed alone, however, no longer gives significant advantage to the merchant ship against the modern submarine. History teaches us that even in World War II merchant ships sailing independently suffered the heaviest losses.

The independent ship could make good use of protected lanes if they were established. A protected or defended lane would involve sanitizing a geographical area against the submarine threat, followed by the installation of a barrier or protected perimeter to provide for penetration warning. It could also involve the positioning of own forces at the perimeters for attacks, destruction, and or neutralisation. Protective forces would be positioned along a transit route. Each unit of the protective force would be assigned an area of responsibility, the size of which depended upon the speed and sensors of the protective platform, perceived threat, environmental conditions, and weapons involved. Ships, aircraft, submarines, and fixed arrays could be employed along the protected lanes which could be an advancing area. Merchant ships proceeding along the protected lane could be passed from one area of responsibility to the next, but it might be necessary to leave gaps or unprotected spaces between the protected areas.

In a future conflict it must be accepted that convoys and even single ships in transit will be very quickly detected and kept under surveillance. Consequently, hostile submarines will be directed by their control centres to make interceptions at points most favourable to the attacker. In the vast Pacific, it is assumed that the most susceptible areas would be just outside the maritime defence zones. Nevertheless, hostile submarines will not be free to cruise undetected since anti-submarine detection systems are also being constantly improved.

A convoy will require the usual close-in escorts which with their helos would provide anti-submarine defence (ASW) and limited anti-air defence (AAW). It is less likely that there would be a threat from surface ship raiders. There have been several proposals for basing helos and even VSTOL aircraft aboard some merchant ships in the convoy. There are practical problems in such basing, when one considers the maintenance and control problems that would be involved, and the additional expense of the helicopter and the ship modifications. However, in wartime, costs do not eliminate useful programs.

In today's world of long range aircraft and of submarines with the capability of launching attack missilkes from well outside the defences of the convoy's accompanying escorts, it is apparent that an defence barrier is required. In World War II, ASW was greatly enhanced by the operations of the hunter-killer group, consisting of a small aircraft carrier and destroyer escorts. It does sem that such groups would be required in any future conflict, either to proceed in advance of large convoys to provide a defended lane, or operated to sanitize particularly vulnerable areas. Since carriers and escorts are in limited numbers, an intensive program would need to be initiated for reactivation of reserve ships or building of new ships.

In conclusion, in the Pacific and Indian Oceans, convoy operations will be essential, but their routing will need to be planned to take advantage of defended lanes and areas. The convoy would be large in order to take efficient advantage of protecting forces. It would sail with a number of surface escorts throughout transit. At least some of these escorts would have hello assets in addition to their own ASW and AAW capabilities. The defended lanes and or areas would be established utilising ASW carrier groups, submarines, and patrol aircraft along the convoy route. These protective forces would be

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by

Commander D.J. Shackelton, RAN

I was sitting in the office the other day, contemplating how long it would take for the 'IN' tray to come back if I dumped it directly into the 'OUT' tray. The 'system' however, somehow seems to be part of the inevitable Star Wars 'Force', and unfortunately appears omnipotent in its ability to wreak vengeance on the less diligent worker by ensuring that files are returned all too promptly. This is a dreadful thought to consider before lunch; perhaps sending some of the harder problems to one of the medical directorates may solve the predicament for a while — I gave up in contemplative ambivalency.

It was during this moment of lateral thinking that I stumbled on to one of those blinding flashes of the obvious which normally only appear after lunch, one of those things that somehow descend from on high which subsequently become part of folklore; that is, that 'Purplespeak' has been having a lend of the Senior Service for quite some time. After umpteen years of complete imbecilic devotion to the truth, I discovered what my parents wouldn't tell me; I'm not really a Naval Officer, I'm simply an equivalent to a real person in the Army.

(For those not familiar with the term of being an 'equivalent', HQADF and Defence military filled billets are sometimes expressed as being 'Equivalent', using Army rank nomenclature as the basis for billet descriptions. By definition therefore, a posting substitute is established, e.g. MAJ (E) means either a Lieutenant Commander or Squadron Leader, as well as a Major; and is sometimes amplified by branch and/or sub-specialisation. Some billets are interchangeable as civilian/military and have a corresponding military rank as well as a Public Service grading, but they often refer to the Army rank for military equivalency.)

For a long while I've been wondering how Army has accumulated all of these people in the (E) category (or is it a mustering or trade with the brown jobs), and have been patiently recruiting people into this mythical special Regiment quite unbeknowns to the manpower planners (a generic term if ever there was one). There is something threatening and sinister about being an equivalent, I don't think it is a slur on my personal integrity, but how can one tell. For a start, how does one recognise another equivalent when there isn't a course in the RAN course planning guide, it is all more than just a little bit of a worry.

So I have looked with some care into this matter of immense and riveting interest to the entire community. I beg to report that the news from the front trenches is not good (FEBA in (almost) today's gobbledygook), the line appears to be breaking at about where one would expect the Schwerpunkt to be located, and that is slightly south east of where the common sense ridge meets its equivalent. I rather think the idea of equivalents must have started back in those days when standardisation became fashionable, but it could also have been at the time when the decision to not make a decision became recognised as being as much a skill as deciding which decision to take. Of course, equivalency brings with it some assumptions. Is it really possible to say that a Lt. Col (E) can command an F/A 18 squadron (note the inclusion of the 'A'), or drive an FFG. It's all very mystical, particularly when some synonyms of equivalent include 'equal' and 'substitute'; how will one really know whee ones allegiance lies — except that no one can say they are more important to the nation than having the simple pleasure of being in receipt of the Queen's shilling (if only it could be inflated from then year values to 1989 prices).

Alas, commonsense does appear to have been overlooked. What say the idea that a different set of equivalents be established, would it be possible to, for instance, suggest tht the two distinct groups of people in the Defence Force be regarded as, wait for it — as Enlisted and Officers. Shades of Americanism I hear; more so, not invented here — how dare this nurd suggest such revolutionary and heretical destruction of a tradition which has been part of the makeup of our heritage.

If, just for a moment this was contemplated, it would be possible to standardise (that word again) each rank in the Services in terms of elevation from ground zero, and then draw the conclusion that different ranks then may

indeed be equivalents, but accepting that some ranks would not be directly related. Would it be possible to attack the umbilical with a scalpel so that each Service need not have a defined rank/equivalent — as is in fact the reality of the situation as it stands at this very moment in time (to coin a phrase). What would be the result of proposing that Enlisted and Officers gradings started at the number 1; a SMNGD say, becoming in Purplespeak, can you believe it, an E-1; and a Cadet Midshipman becoming an 0-1 etc. Because we ought to retain some degree of uniqueness from those damn Yankees, I rather think the longer, and therefore more educated and impressive nomenclature should be ADFE-1 and AADFO-1; we don't want to become known as imitators or otherwise lacking in originality.

After this traumatic contemplative desecration of some years worth of history, I decided to take a break from sweating at the desk and consider the Cross Report which, amongst other wonderful and utopian suggestions, makes the observation that officers should be able to reach Flag status after 20 years service, by about the age of 40, or about when members of the Public Service could expect to reach SES Level 4. For one, I heartily applaud this contention but am a little apprehensive about my own prospects, having now passed this age and being at least some way off this rank. I couldn't help feel however, (a lovely word, meaning 'in spite of'), that this attempt at equivalency was lopsided with this propositioned. With my overly simplistic view of the meaning of life (not quite that of John Cleese), I rather had some difficulty working out how Albert Einstein's theory of relativity permitted the compression of time required from that of the present, to that of the future (or the past, depending upon how it is looked upon) for acquisition of that slippery thing called experience. Perhaps, I pondered, if the Service ranks and those of the Public Service were not so (apparently) conventionally linked, and that military skills and those non strictly military skills required to represent the Service in a non military environment (scenario, most of Russell etc.) were looked upon separately, then maybe my salary would reflect the degree of accountability I am called upon to accept when I am an equivalent of some sort or other. This is by no means a cheap shot at some of the professionally excellent members of the Public Service with whom I work, but I gave up on this line of thought because, it would of course, require me to be paid for having two distinct, non equivalent and difficult to acquire skills.

Back to the 'IN' tray chaps (persons), perhaps a squadron of tanks/FA-18's/submarines on another day. It's all in a day's dreaming.

The Author

Commander David Shackleton joined the RAN as a midshipman in 1966, qualifying as a PWO in 1975 and as a PWO(D) in 1978 after completing the AWO(A) course. In addition to RN exchange service and a long stint in *HMAS MELBOURNE*, he has had several postings to DDG's. After initially serving in *HMAS PERTH* during her 1968/69 Vietnam operations, he returned as her Executive Officer in 1983. David Shackleton is a graduate of Russell Hill, the RANSC and JSSC, and is presently in command of *HMAS DERWENT*.

CONVOY OF DEFENDED LANES

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