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

In order to achieve the stated aims of the Institute, all readers, both members and non-members, are encouraged to submit articles for publication. Preferably, submissions should be typed, double spaced, on A4 paper; the author's name and address must be shown clearly, even if a pseudonym is required for printing purposes; to be eligible for prizes, original articles must be accompanied by statements that they have been written expressly for the ANI; and short biographies will be welcomed. The Editor reserves the right to reject or amend articles for publication.

Cover: The guided missile frigate HMAS ADELAIDE is framed by the Mk13 missile launcher of a sistership. (Photograph: POPH Cameron Martin)

CONTENTS

DISCLAIMER

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

FROM THE PRESIDENT

At the Annual General Meeting on 19 February 1988 some important decisions were taken concerning the future of the Institute. These involved the vexed question of membership and a new fee structure. I ask that you read the report of the meeting at page 7.

The presentation by Rear Admiral Richard Hill on "Maritime Strategy for Medium Powers" on 20 April 1988 was well attended. I will attempt to take the lead on more such events as the opportunities present themselves. I was particularly pleased to see so many young officers from the Australian Defence Force Academy present. Admiral Hill's address is the lead article in this issue of the journal.

Your new council is settling down to the task ahead of it. The major objective for 1988 is "the production of a professional journal". It is unfortunate therefore that after only a few months as Editor, Commander Warren Milfull is unable to continue due to a change of postings. I am pleased to report that Lieutenant Commander Don Agar has agreed to take over and thank both officers for their support.

It is also relevant to the objective that Commodore Daryl Fox RAN (retd) is now making his presence felt as Office Manager and has been able to lift the advertising support for this issue of the Journal significantly. There is a limit to the Institute's ability to subsidise the Journal and adequate advertising support is essential if proper standards are to be maintained. If anyone is aware of a potential advertiser please let a councillor know.

I believe that the Journal generally should concentrate on current and future developments of relevance to the Navy and the maritime profession and that all members of the Institute share a responsibility for its standard. A steady flow of vigorous, challenging and well argued papers on appropriate themes are essential if the Journal is to maintain its credibility for professionalism. This therefore is a plea for you to help your Council achieve its objective.

Sincerely
Ian Callaway

FROM THE EDITOR

This issue is my first as Editor and, as discussed in the 'From the President' column, will be my last due to a sudden change of posting. Lieutenant Commander Don Agar will assume the role of editor once this issue is published and I urge all potential contributors to reduce his 'panic' workload by submitting any articles progressively throughout the period between now and the cutoff date of mid-month prior to the date of publication of the next Journal.

This issue covers a wide field of topics and it is a pleasure to publish the ANI Silver Medal winning essay from RANSC 18/87 and that of the 1987 Peter Mitchell Essay Prizewinner. I congratulate LCDR's Ian Laxton, RAN and R.M. Jones, RANR respectively on their success and thank the Chief of Naval Staff for granting ANI permission to publish the latter essay.

The emphasis of this issue is directed at strategic developments in recent years within South East Asia (LCDR Laxton's essay) and the Indian Sub-continent (CMDR D. Davidson's article). Furthermore RADM Hill kindly allowed publication of his recent Canberra address on Maritime Strategy for Medium Powers. To balance the content, LCDR Jones's article on the employment of the Reserves in the RAN provides an excellent historical background and way ahead for our valued Reserve colleagues while CMDR John Scott looks at the naval contributions in the Gallipoli campaign for our little bit of history. Engineers' contributions to publications such as this are rare, therefore it is good to see a very interesting article for our more technical readers about Fleet Operational Readiness by CMDR D.L. Stevens, RAN rounding off our major contributions.

In addition this issue details the changes to membership rules and fees debated and approved at the ANI AGM of 19 February 1988. Noting this change in fee structures it is timely to remind all members who have been unable to settle their accounts that this journal costs a considerable sum to produce and your membership fees form a major component of the financial base of the ANI.

Finally Commodore Bateman pays tribute to an eminent Australian and Naval Officer, Vice Admiral Sir Henry Burrell, KBE, CB, RAN (Rtd), who recently passed away.

In closing I thank all concerned for their patience and contributions during my short time as editor and request you continue this assistance with my successor.

Cheers
Warren Milfull

SEAPOWER 87 PROCEEDINGS

Copies of the SEAPOWER 87 Proceedings have now been distributed to those attending the Seminar. Additional copies are available at a cost of $A12.50 each, including postage. Please place orders with The Secretary, ANI, PO Box 80, Campbell, ACT 2601.

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

CREEPING JURISDICTION IN SOUTHEAST ASIA: ITS EFFECT ON NAVAL MOBILITY

By
LIEUTENANT COMMANDER I.T. LAXTON, RAN

'Naval strategy and the law of the sea have been connected. But never has the character of the relationship, or its implications, been as complex as it promises to be in the years and decades ahead'. (1)

Ken Booth

The objective of naval strategy is the use of the sea. (2) This use can be divided into three broad categories: the passage of goods and people; the projection of military power; and, the exploitation of resources in or under the sea. Navies exist as a means to further such purposes; their task being to secure the sea for one's own use, and to attempt to prevent others from using the sea in ways which are to one's disadvantage. To achieve this a naval force requires mobility.

As an island nation with diverse maritime interests, Australia is dependent on the sea for its economic well-being and its security. It follows that Australia has a significant vested interest in developments which affect the mobility of its naval forces.

One region that has recently undergone significant change in this respect is that of Southeast Asia. This region is of particular importance to Australia since:

> 'Its proximity to us makes it the principal area from, or through, which any major conventional assault upon Australia would have to be mounted. The region is also astride our, or adjacent to, our sea lines of communication along which pass many of our strategic imports and much of our trade. ...These lines of communication are important also for the United States, Japan, and the countries of ASEAN. The United States and the Soviet Union both use Southeast Asian waters for naval transfers between the Pacific and Indian Oceans.' (3)

The impact on naval mobility in this region has arisen from the extension of the bounds of maritime jurisdiction of the Southeast Asian nations. This has taken the form of territorialization of what were once 'high seas' and has become known as 'creeping jurisdiction'. This essay seeks to examine the implications of this phenomenom of creeping jurisdiction on Australia's maritime strategy; in particular the effects on naval mobility that will result from archipelagic declarations and inter-related regimes concerned with straits and territorial seas. To this end, it will look at the national pressures behind creeping jurisdiction (in the form of the archipelagic declaration by Indonesia), the current status of naval mobility post 1982, and the implications of further extensions of maritime jurisdiction.

BACKGROUND

Within Southeast Asia, a major protagonist of the rights of coastal states has been the Republic of Indonesia. Comprising over thirteen thousand island, it constitutes the most extensive archipelago in the world and stretches over 3000 nautical miles from south of the Indian sub-continent to the north of Australia, straddling the equator. It has a land area of approximately 735,000 square miles which incorporatres only a quarter of the extent of the seas over which the government of the Republic claims jurisdiction.

Indonesia did not exist as a political form until the early twentieth century. Since its independence as a State, it has suffered a sense of vulnerability that derived not only from its

The Author
Lieutenant Commander Ian Laxton joined the RAN in1974 and has considerable experience at sea most recently as Executive Officer of HMAS BENDIGO. In 1983–85 he was posted to Navy Office in DNUR and returned to Canberra in 1988 to the Directorate of Material Programme Development.

geography, and diverse ethnicity, but also from a historical experience of foreign intervention involving the use of sea power. (4) Thus in 1957 Indonesia issued a declaration that laid claim to the entire archipelago, encompassing a total area of 666,000 square nautical miles of sea. The declaration argued that:

> 'The geographical composition of Indonesia as an archipelago consisting of thousands of islands has its own particular characteristics. For the purpose of territorial unity, and in order to protect the resources of Indonesia, all islands and seas in between must be regarded as a total unit,'

It continued:

> 'On the basis of these considerations, the Government declares that all waters, surrounding, between and connecting the islands constituting the Indonesian State, regardless of their extension or breadth are integral parts of the territory of the Indonesian State and therefore, parts of the internal or national waters which are under the exclusive sovereignty of the Indonesian State. Innocent passage of foreign ships in these waters is granted as long as it is not prejudicial to, or violates, the sovereignty and security of Indonesia.' (5)

The Indonesion declaration of the archipelagic principle was essentially a product of political considerations. Fermenting regional dissent within Indonesia had erupted in the formal rejection of the authority of the government in Jakarta and the achipelagic declaration was seen as a means of demonstrating the integral unity of the State. Economic motivation was not a prime consideration at the time, although it was indicated as such in the actual declaration.

To the north of Indonesia, the Philippines had declared the archipelagic concept in 1955. This claim accounted for an area of 148,921 square nautical miles. (6)

As a result of these two claims, large areas of waterways were converted into archipelagic waters under the sovereignty of their respective governments. Southeast Asia had begun to witness the phenomenon of territorialization of the sea or 'creeping jurisdiction'.

THE 1982 CONVENTION

The Convention, which was concluded at the Third United Nations Conference on the Law of the Sea (UNCLOS III) in late 1982, clarified several aspects of the law of the sea regime relating to creeping jurisidiction, which have significant import on the mobility of naval forces. Those which pertain primarilily to mobility are:

a. the right of innocent passage,
b. the right of transit passage, and
c. the recognition of the archipelagic state.

Innocent Passage

The 1958 Convention gave ships of all states the right of innocent passage through the territorial sea. Such passage through the territorial sea or through straits used for passage between one part of the high seas and another, or the territorial sea of a foreign state, could not be hampered nor suspended by the coastal state. This liberal interpretation of innocent passage came to be seen by some newly independent coastal states as an intrusion on their sovereignty and an attempt to enshrine traditional overbearing rights under one particular interpretation of International Law. The concept of innocent passage was also the historical one which had evolved before the advent of submarines and aircraft.

The 1982 Convention has two fundamental differences in this regard. By extending the territorial sea up to twelve miles and the contiguous zone up to twenty four miles, it has in effect allowed the closing off, as territorial sea, of 116 straits used for international navigation, and which had previously been regarded as high sea passages. (7) Twenty of these straits are in the Southeast Asian region.

The regime of innocent passage is also much stricter under the new Convention, in accordance with the concerns of coastal states for pollution control and the protection of national security. A coastal state may now, in the interests of its own security, temporarily suspend, without discrimination, the right of innocent passage. Moreover specific activities are listed as being contrary to the meaning of innocent passage. These are generally directed at warships. A warship which is exhibiting the right of innocent passage thus is inhibited from taking some fundamental measures of self defence. (8)

The coastal state is also allowed to require ships to confine their passage to stipulated sealanes within the territorial sea. Thus it appears possible that a coastal state could justify the disruption of

the flow of shipping which was merely exercising the right of innocent passage. There remains the fundamental right of the coastal States to take steps deemed essential for the protection of its security.

Transit Passage

The acceptance of a new regime, transit passage, overcomes the limitations of innocent passage and is applied to straits used for international navigation. Ships exercising this right are required to refrain from any activities other than those incidental to their normal modes of continuous and expeditious transit. Furthermore these activities are not specified in the same way as they are with innocent passage, nor can transit passage be suspended.

Archipelagic Waters

Archipelagic waters are those waters contained within baselines drawn between the outermost islands and drying reefs of the archipelago. Such waters assume the characteristics of the territorial sea. The archipelagic state exercises sovereignty over these water (regardless of depth), the airspace above them, the seabed and the resources therein.

The quid pro quo for international acceptance of archipelagic status is the regime of archipelagic sea lanes passage. This allows ships of all nations the right of unimpeded, continuous and expeditious passage through archipelagic waters along sealanes designated by the archipelagic state. In the event that these are not designated, then passage may be exercised along the routes for international navigation. This regime is governed by similar provisions to the transit passage regime with archipelagic sealanes up to 50 nautical miles wide becoming virtual 'straits'. Outside such sealanes,and within archipelagic waters, all ships have the right of innocent passage only, and must abide by the provisions of that more restrictive regime.

It is noteworthy that article 53 of the 1982 Convention refers to archipelagic sealanes transit 'in the normal mode'. Normal mode is interpreted, at least by the major maritime nations, as meaning that submarines can transit submerged and that surface units may undrtake those activities necessary for their security. The term 'normal mode' is not defined in the Convention and therefore is open to interpretation. The fact that the words are omitted from the description of transit passage permits the view that achipelagic sea lanes passage has rather more clarity, particularly with regard to the surface ships, than the regime of transit passage.

The 1982 Convention has rationalised much of the law of the sea relating to the mobility of naval forces. In some instances it has improved access and in others more clearly defined it. From Australia's outlook it would appear that the inconveniences to naval mobility are acceptable, and in most cases are similar to practices that have been the norm under customary International Law.

DEVELOPMENT OF LAW OF THE SEA

Before we can speculate about the implications of this new law of the sea regime, it is necessary to refer to the past, since our views about the past tend to shape our speculation about the future. To this end, it is necessary to look at the changing nature of the law of the sea and our perceptions of this change.

Our ideas about the law of the sea are based on long established Anglo-American navalist perspectives. These were, and are, the product of a more confident and less complex era and one which was characterized by maritime supremacy. Although the circumstances have now changed significantly, navalist verities remain part of the folk memory of our world. (9)

However, instead of studying the order and self confidence seen by the traditionalists, it is perhaps more relevant to look at other characteristics in the development, that is, those elements which seem more pertinent from the perspective of an increasingly confusing world, full of complex inter-relationships and highly politicized issues. One might then see that the law of the sea has always followed a pendulum pattern, and that generally its evolution has been untidy. (10)

When Dutchman Hugo Grotius first proclaimed the doctrine of the 'Freedom of the Seas' in 1609, his motive was political. (11) Thus from the outset, the law of the sea was conceived as an extension of politics. The development of archipelagic regimes in Southeast Asia is evidence that it remains so today.

The pendulum of the law of the sea can in part be attributed to this basic concept of 'freedom of the seas'. Like anything with 'freedom' in its title, it has taken on moral overtones. It is however, both a beguiling word and a slippery concept. For the powerful, 'freedom of the seas' has been a permissive doctrine, which has enabled them to use the sea to further their interest to the limits of

their will and capability. For the weak it has been a source of oppression.

It is a desire on the part of the weaker states for freedom from oppression and its security implications that has led, on occasion, to 'mare clausum' or creeping jurisdiction. That this has led to the law of the sea evolving in a pendulum nature is attributable to the legal outcome of the contests between the purveyors of 'freedom from', and 'freedom to'. It appears that whichever regime was the more dominant became the status quo and more than likely a legal regime under customary International Law. Thus the law of the sea has evolved in a pendulum fashion, moving between freedom of navigation on one hand, and enclosure on the other.

The doctrine of the 'freedom of the seas' was merely a symptom of the fact that nations attempt to further their interests by whatever instruments they have at their disposal, be they military, economic, diplomatic or legal. The growth of treaty making in the present century, especially those of a multilateral nature has resulted in efforts by the international community to codify large areas of International Law, and to provide machinery for its enforcement. The sea and the air, as the most important media for interstate movement have naturally been subject to this codification process. To date, there have been three United Nations Conferences on the Law of the Sea (UNCLOS I, II and III). The first two conferences were held in 1958 and 1960 respectively.

UNCLOS III

The Third Conference, UNCLOS III, began in 1973 and attempted a more ambitious programme of the codification of the law of the sea. Nations worked together, in an unprecedented attempt to develop equitable global rules for a broad range of ocean related issues. Despite this, however, the military dimension of the law of the sea was neglected. While the law of the sea 'industry' flourished, naval strategists were for the most part preoccupied by a variety of more immediate concerns. The technical, political and economic complexities involved in maintaining or enhancing the utility of naval forces in an increasingly hostile environment meant that law of the sea matters received only scant attention. Naval establishments were not as worried about the strategic developments of their potential adversaries, as they were about the budgetary ambitions of their own national armies and airforces.

Thus, while naval establishments were distracted by more pressing concerns, the attention of the law of the sea community was dominated by the commercial and resource problems relating to the management of the oceans. At the same time, security and order came to be understood to rest on more than firepower.

The resultant convention, which bears all the scars and signs of nine years of multilateral negotiation, was signed by a majority (118) of signatories on 10 December 1982. These included the states of Southeast Asia and Australia. Non signatories include the United States of America (USA) and the United Kindom (UK). This in itself has created a potential source of conflict since what is the right relationship between signatories and non signatories? In effect what will be the law of the sea for non signatories? Some, like the USA, claim the right to pick and choose, believing that the provisions which they are willing to accept are norms of customary International Law. Others have quickly stated their opposition to such an attitude, stressing that the convention should be treated as an integral package. It is likely that the outcome will depend upon who has the most political power. One might conclude however that, even now, the future of the freedom of navigation cannot be assumed to be fully secure.

Nonetheless, the 1982 Convention is a significant document, which seeks to balance national rights and duties and achieve an effective compromise between the interests of all states. In some respects it is an experiment in international co-operation, in others it adjusts what was the established law to a rapidly changing environment. As mentioned previously it has clarified the concept of the archipelagic states and also the inter-related issues of innocent passage and transit passage.

FUTURE OF NAVAL MOBILITY

From the viewpoint of the future of naval mobility, the outcome of UNCLOS III seems reasonably satisfactory. However, whatever the words of the Convention, its success will be judged by what happens in practice. This will depend on the way coastal states choose to interpret the Convention and the way naval powers respond in their operational practices. The constructive ambiguities in the text allows states to try to get what they want, and there is sufficient uncertainty in parts to allow coastal states to press for extensions of their control. Commander Neutze of the United States Navy (USN) warned in 1983:

'The clearest interpretation of the ambiguous language of the treaty will be the actual operational practices of those who base their navigational rights on its provisions. ...It is important that the naval powers, including the United States, demonstrate clearly — through their operational practices over the next few years — their understanding that the language of the treaty has no significance on naval mobility.' (12)

That the USN is determined to stop unnacceptable practices is beyond doubt as evidenced in the Gulf of Sirte in August 1981 and in the Persian Gulf in recent months.

If the future of the 1982 Convention seems satisfactory for naval powers, the longer term view is not so clear. It is possible that the current trend towards enclosure of the seas will continue. Coastal states will want a bigger say in what happens to their maritime environs. It would not be surprising if some of them did not turn towards achieving a greater control over foreign warships and aircraft in, over, or under their adjacent waters. It is also natural that the weaker states, because of their weakness will want the maximum restraints placed on the freedoms of the more powerful.

There will be increasing competiton for ocean resourses as the pressures on the social and economic infrastructures of the Southeast Asian countries grow. As the demand for food and energy resources continues to grow, one may see attempts by states to further extend their jurisdiction. The 1970s saw a number of sovereignty disputes over ocean resoures in Southeast Asia, and the Spratly and Paracel Islands of the South China Sea remain an area of contention.

IMPLICATIONS OF MORE RESTRICTIVE REGIMES

An inevitable impact of a move towards a more restrictive regime will be to place greater importance on the co-ordination of foreign policy and strategy. Diplomacy will immediately become a paramount factor in ensuring military access. This will in turn increase the need for more effective communication between the political and military arms of government. Naval establishments will need to ensure that their political masters are conversant with the limitations, as well as the requirements, of naval forces as instruments of policy. The foreign policy implications of more restrictive regimes point to the need to improve relations with states that sit astride our sea lines of communication.

It can be argued that any limitation on the mobility of warships to enter foreign waters will significantly diminish their usefulness as instruments of foreign policy. Creeping jurisidiction would seem to imply less room for transit. It is noteworthy that tactics and technology are also pushing naval forces further from the coast. The need for dispersal has already made inconveniently large the area of sea required for a modern task force.

However, if the requirement exists to show a naval presence in a particular area, then the process of creeping jurisdiction, by its extension of boundaries, will heighten the effect of naval forces which cross those boundaries. It will increase the symbolism of such naval action and it will discourage knee jerk reactions. Thus, territorialisation of the sea will help to serve as a fail safe device for naval powers, and should improve the rationality of naval diplomacy.

Problems in the definition of 'transit' or concepts such as archipelagic sea lanes passage, should be able to be resolved by diplomatic action, in the form of resolution and bargaining. If and when problems arise in a more restrictive regime, then resolution will be at a premium. In this respect the passage of the strike carrier HMS VICTORIOUS through Lombok Strait in 1964 is pertinent. (13). The demonstration of military power does not always backfire. However the more restrictive a regime, the stronger the sense of legitimacy on the part of the coastal state in venting hostility against a naval power. Thus the need for a naval power to have naval forces in sufficient quantity and with sufficient firepower to get its way without a fight — perhaps the true meaning of military power.

PROBLEMS OF THE COASTAL STATES

Naval powers, in looking at the worst, have a tendency to disregard the costs which a state implementing a more restrictive regime would incur. Perceptibly such states would become targets, being confronted with the problems of power politics to a much higher degree. They would have new authority and new responsibilities. With these would go the need to have sufficient capability to discharge these responsibilities, and this may encourage localized arms races.

A more restrictive regime would seriously increase the military and foreign policy problems of the coastal state concerned. When transit is 'free', there is no requirement to make difficult political decisions, and that is often an advantage to some states. Moreover, such a regime is likely to engender regional disorder, and for most parts, coastal states have little interest in regional disorder.

CONCLUSION

The phenomenon of creeping jurisdiction that has occured in Southeast Asia post World War II has implications for the mobility of the Royal Australian Navy. The 1982 Convention of the Law of the Sea, concluded at UNCLOS III, has rationalised such effects by clarifying and legitimising the rights of innocent passage and transit passage, and the other concept of archipelagic states. It would appear that naval mobility is assured, at least in the near future.

The recent changes in the law of the sea will help the evolution of a moderate society by giving more flexibility in strategies of escalation, assisting the tactics of naval diplomacy, enhancing the symbolic use of warships, and perhaps most importantly, by encouraging rationality and discouraging knee jerk reactions.

There is however, sufficient ambiguity in the Convention to allow coastal states to press for extensions of their maritime boundaries. What happens in practice will depend on how the naval powers respond to these actions.

The optimum policy for the use of the sea by a maritime nation such as Australia is one which includes:

a. a foreign policy which seeks to strengthen the economic structure and stability of our Southeast Asian neighbours, and
b. a military posture based on a maritime stategy which would meet with restraint the confrontations that will occasionally erupt.

Such a strategy would require Australia to maintain a naval force of sufficient quantity and capability, in order to ensure that its interests, and those of neighbours and allies are protected.

Notes and Acknowledgements

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13. The passage of HMS VICTORIOUS through Lombok Strait in 1964, during Indonesia's confrontation with Malaysia, was an exercise in co-ercive diplomacy. Such passage was an attempt to maintain the rights of transit through archipelagic waters.

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OBITUARY

Vice Admiral Sir Henry Burrell, KBE, CB RAN (Retd)

Sir Henry Burrell died in Canberra on 15 February 1988. His service in the Royal Australian Navy spanned forty-four years from a thirteen year old cadet midshipman at the RAN College in 1918 to Vice Admiral and Chief of Naval Staff from 1959 until his retirement in 1962. He commanded four RAN ships (NORMAN and BATAAN in World War II and, subsequently, AUSTRALIA and VENGEANCE) and was twice Flag Officer Commanding Her Majesty's Australian Fleet.

His shore postings included being Australia's first military attache to Washington in 1941. This involved Sir Henry in the top level strategic conferences that took place that year between the US and the UK on the possibility of war in the Pacific. His experiences in Washington made a significant impression on Sir Henry and perhaps conditioned his attitudes for the remainder of his naval career.

As Chief of Naval Staff, Sir Henry was confronted with several critical force structure dilemmas but he was able to win favourable decisions for the RAN which are still reflected in today's Fleet. During his time in office, plans were initiated to acquire the TON Class minesweepers, Wessex ASW helicopters, the OBERON Class submarines and Australia's first purpose-built survey ship, HMAS MORESBY. However, his two greatest successes were first, to have a Government decision in 1959 to disband the Fleet Air Arm reversed, at least as far as helicopters were concerned. This reflected Sir Henry's deep commitment to the importance of organic naval aviation. Then he was instrumental in the decision to acquire the three CHARLES F ADAMS Class DDGs from the USA (or 'CHARLIE BURRELLS' as they were called for a while). When we consider that the alternative then was the UK COUNTY Class ship, how fortunate the RAN is that Sir Henry Burrell was prepared to break from the previous tradition of British designed ships.

Apart from being a distinguished naval officer, who left his mark on the RAN, Sir Henry Burrell was also a true Australian. Naturally friendly and approachable, he was an enthusiastic sportsman excelling at tennis and rugby union. He liked a bet and owned several successful race horses, More importantly, however, during his naval service, he was renowned for his common touch and his interest in the well-being of his men.

Sir Henry's autobiography, *Mermaids Do Exist*, published in 1986, records that on leaving HMS DEVONSHIRE in 1938, for the first time in his career, he was advised of an adverse comment in his personal report. The comment was that he was 'too familar with the sailors' but this did not concern Sir Henry. In his words:

> 'Perhaps I should have mended my ways but I had no intention of doing that. In my view, the ship would have been more efficient if officers and ratings had been in closer touch.' (*Mermaids do Exist*, p65)

That comment says a lot for Sir Henry Burrell's style. He was very good at communicating with his fellow human beings and bridging, for example, the generation gap between himself and somebody years younger. This quality lasted him throughout his life. In retirement one of his greatest joys was a chance meeting with an old shipmate and Sir Henry Burrell leaves behind many friends and admirers. May he rest in peace.

Commodore S.J. BATEMAN, RAN

ANI

MEMBERSHIP CHANGES

The Annual General Meeting held on Friday 19 February was a significant meeting from the point of view of the membership rules. The motion placed before the meeting was that advertised in the November Journal and proposed that:

a. Regular membership be open to all serving members of the RAN or RANR and Naval Reserve Cadet officers and persons who, having qualified, subsequently leave the Service;
b Associate membership be open to all other persons professing an interest in the aims of the institute who are not qualified to be Regular members; and
c Notwithstanding the rules for membership, the President of the ANI must be a serving member of the RAN.

The significance of the amendment was that under the existing rules, Regular membership was restricted to members of the Permanent Naval Forces. Members of the Naval Reserve could not be Regular members and Regular members reverted to Associate status on retirement. The only differences in entitlement between the membership forms were that Associate members could not vote at General Meetings or hold office as a Councillor or Office Bearer of the Institute.

The founding members of the Institute had restricted membership in order to ensure that the Institute remained primarily a current professional body rather than a specialized form of ex serviceman's association or another historical association. Not that there was any prejudice against history or ex servicemen but rather that these markets were well catered for by existing organizations.

For various reasons, several attempts have been made to expand the membership. Primarily the attempts to change have been motivated by:

a. perceptions that the discrimination against Reserves was unjust;
b the view that restrictions on membership inhibited growth partly as a consequence of sub para a.;
c. the view that growth was essential to generate revenue to maintain the standard of the Journal in the face of rising costs; and
d. problems in management of the Institute caused by posting of PNF Officers.

The last attempt to change membership rules was in November 1985 when the issue was raised in the Journal and members were asked to register their views. Eleven responses were received and six of these were from Councillors or recently retired councillors. Ten responses supported opening membership but the response was so poor no further action was taken. The 1987 Council proposed the amendments to the membership rules as part of their review of the way ahead for the Institute. Other issues in this review included the establishment of an Office Manager to provide some continuity in management.

The AGM considered the proposed amendments and discussed them in committee to resolve exactly in what form the amendment should be put.

The first issue discussed was whether regular membership should be extended to Reserves and Naval Reserve Cadet Officers. The debate revolved around the desire to maintain the "professional" nature of the Institute. The meeting noted that recent changes in emphasis of the role of the Reserve forces had effectively integrated them into the Navy as a whole. Certainly the Reserves have been the custodians of the professional roles of Control of Shipping and to a lesser extent Intelligence. Now Naval Reserves were earmarked to provide the bulk of personnel in minewarfare and coastal patrol forces. As such the Reserves are an integral part of the Naval structure rather than an addendum to provide manpower to top up complements. The situation with Naval Reserve Cadet Officers was considered to be different. The meeting considered that while Naval Reserve Cadet Officers are a dedicated band who do a valuable service promoting the Navy, they are not integrated into the Navy in the same way as members of the Naval Reserve. The meeting also considered that Naval Reserve Cadet Officers would generally qualify for membership by prior Service in the RAN or RANR.

The second major issue related to the position of retired members. While accepting that the Institute was attempting not to establish itself as an ex-serviceman's association, the meeting accepted the proposition that retired members were repositories of considerable professional

knowledge. Providing the Insitute remained in the hands of Serving members, there was no real reason to change a member's status on retirement from the PNF or the Naval Reserve.

The third issue addressed was how control of the Institute should be restricted to ensure that it remained primarily a current professional Institute. The amendment proposed by the Council had envisaged that this would be achieved by restricting the Office of President to a serving member of the RAN. Rear Admiral Swan, a former President and honorary life member, had written to the President noting that if the Institute was to remain in the control of serving members then at least half of the Council should be serving officers. This view was accepted by the meeting.

The membership proposal was then amended to:

a. Change the existing definition of Regular membership to include members of the Naval Reserve and persons who, having qualified, subsequently leave the service;
b. amend the definition of Associate members to reflect the changes to Regular membership; and
c. amend the provisions for the Office of President and the Council to restrict the Office and President and at least one half of the Council so that they are filled by members on full time service in the RAN.

The intent of the "full time service" terminology was to resolve any doubt on members of the RANEM or RANR on full time service. The opinion of the meeting being that if a member was actually undergoing full time service then that member should be eligible for any office.

The AGM passed the amended membership proposal unanimously. The changes to the Constitution have been lodged with the ACT Commissioner for Corporate Affairs in order to complete the requirements to formally amend the constitution.

In summary then, all members who are in the RANR or who have served in the RAN or RANR are now Regular members and are entitled to vote at general meetings and hold any office other than President. Congratulations.

FEES

The Annual General Meeting also considered changes to the membership fee structure. It was decided that membership fees would be kept to a minimum, commensurate with the need for the Institute to remain self-supporting. The joining fee for 1988 will remain at $5.00 and the annual subscription at $20.00. From 1 January 1989 the joining fee will be abolished and the following new subscription rates implemented:

Members	Annual	2 Years	3 Years
(Regular and Associate)	$25	$48	$65
Journal Subscribers	$27	$52	$75

A copy of the quarterly journal will be sent free to all financial members.
All fees are due annually on 1 January.

Syd Lemon
Commander RAN
Senior Vice President

FLEET OPERATIONAL READINESS — A FIGURE OF MERIT

BY
Commander D.L. STEVENS, RAN

SYNOPSIS

The question of just how capable Australia's Defence Forces actually are, is one which is asked irregularly but routinely by the popular press and by others within the Defence and Government Infrastructure. To date the assessment has always been mostly subjective because of the difficulty in quantifying the many vague or esoteric parameters involved. A means of quantifying the *"readiness"* in a relative sense, to enable comparisons between one year and the next, can be achieved via use of a *"Figure Of Merit"*.

INTRODUCTION

Are the Defence Forces of Australia going downhill? Is the Nation worse off than it was ten years ago? Are our Armed Forces keeping up with the regional and international threats? These questions and others are often considered by those associated with the Defence of Australia. Inevitably the resolution of the question reduces to a blatantly subjective assessment because the topic has so many vaguely (and subjectively) defined parameters which few people can comprehend, and for most, the raw data is simply not available. In situations such as this where it is impossible to achieve true objectivity, the generation of an index such as a *"figure-of-merit"* holds considerable promise.

Depending on the definition of the constituent parameters and their relevant weightings, so the figure-of-merit can indicate trends and help to identify the negative influences which often can only be identified intuitively. Data which is provided from intuitive sources, even that provided by professionals, has little place in the procedures of routine bureaucratic decision making, although it undoubtedly has great prominence in tactical situations.

What Is a Figure Of Merit?

A Figure Of Merit is a number without any units which, because it is precisely defined, can be used as a relative index for comparison of any definable quantities. Although in this case the term *"Readiness"* has proven difficult to define to date, it can nevertheless be defined to mean anything, even subjectively assessed values to which can be attributed numerical quantities. By this means it has been possible to *"define"* numerically, albeit using the subjectiveness of the author, the term *"operational readiness"*.

What Is Operational Readiness?

Operational Readiness as commonly expressed, is the ABILITY of forces, units, weapon systems, or equipments to deliver the outputs for which they were designed, and includes the ability to deploy and employ without unacceptable delays. Included within these parameters are components of manpower, logistics, supply-support, training, and Defence and civilian infrastructures.

Why Attempt To Quantify Operational Readiness?

Feedback of information is a natural process used by man and machine to monitor activities and to enable comparison of them against desired criteria. Depending upon the result of the comparison process the activity concerned may then be modified to better achieve the specified criteria. To enable any nation's defence capabilities to be routinely assessed in this manner by policy makers, as part of the ongoing strategic analysis process, and as part of the routine administration of the particular Defence Force, a conscious definition of the criteria for feedback assessment should take place. Operational Readiness is one such criterion.

A *"yardstick"* by which the particular force could gauge its advancement or regression should prove a useful vehicle on which to base such research as *"Force Structure Analysis"* or

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Harpoon firing — HMAS Darwin.

Ammunition stocks.

more routinely, such parameters as *"Training Effectiveness"* and the operational effects of *"Personnel Exit Rates"*. A corollary to this approach however, is that such a *"yardstick"* would also provide information to administrative opponents with which they could effectively destroy poorly conceived management proposals.

Nevertheless, the quantifying of *"operational readiness"* would lead to the establishment of a *"higher plane"* to the defence debates and provide a valuable management tool. The yardstick intended for this purpose is this Figure-Of-Merit, and the discussion relates to its possible use for naval forces.

DISCUSSION

What Parameters Are Relevant?

What parameters are relevant to assessment of naval force readiness? The first to come to mind are usually those related to the effective firing of weapons, but further thought then reveals that basic weapons firings cannot occur effectively unless a whole range of personnel, logistics and organisational objectives have first been achieved. Beyond this level of effectiveness then comes the more difficult weapons practices, and consideration of the negative factors which detract from the overall *"readiness"* of the Force under examination.

There is scope for great detail in an examination of this kind, but too much detail would cause the evaluation process to become bogged down whilst waiting for data from too many different sources. The converse would also be unacceptable. Too little detail, such as considering only weapons practice firing results and not the influences of personnel and logistics, would limit the credibility of the figure-of-merit as an indicator of total force effectiveness.

The parameters selected here for inclusion in this figure-of-merit for the RAN can mostly be represented by data which is routinely available to higher management on an annual basis. Except for some of the personnel management related statistics, compilation of the figure-of-merit reduces simply to inserting numbers into the formulae prescribed in this paper.

What parameters should be considered? This list is perceived to be representative of the factors which should be considered in a comprehensive assessment of the Operational Readiness of the RAN.

Weapons Practice Assessments
- Gunnery
  - AA Anti-Air
  - SU Surface
  - NGS Naval Gunfire Support
- Missiles
  - AA Anti-Air
  - SU Surface
  - AS Anti-Submarine
  - SSLSU Sub Surface Launched Surface Torpedoes
  - ALT Air Launched Torpedoes
  - SLT Surface Launched Torpedoes
  - SSLT Sub Surface Launched Torpedoes

Non Firing Systems Assessments

Non Ordnance Systems Assessments
- Sound Range Assessments
- Radar Beam Pattern Checks
- Sonar Assessments
- Communications assessments

Missed or Deferred Serials

Length of Time to Repair Significant Defects

Total Sea Days

Total Flying Hours

Formal Inspection Reports
- Safety Inspection
- Fast Cruises
- Work Up Progress Evaluations
- Operational Readiness Evaluations
- Formal Departmental Administrative Assessments

Personnel Factors
- Ratio of Trained to Incompletely Trained Personnel
- Ratio of Numbers Borne to Numbers Billeted
- Personnel Exit Rate

Ammunition Stocks

DETAILED DISCUSSION OF INDIVIDUAL PARAMETERS

WEAPONS PRACTICE ASSESSMENTS

Gunnery

Gunnery weapons practice firings usually take place against three basic target types, ie. air targets, surface (of the sea) targets, and shore targets requiring naval gunfire support (NGS). The methods of assessment of each type of firing are different but all essentially require bullets to be fired within a certain proximity to a target so as to enable fuses to activate and/or blast damage to (probably) destroy or damage the target.

Gunnery factors which are relevant to the concept of "operational readiness" include, THE AVERAGE NUMBER OF PRACTICES PER SHIP, THE AVERAGE NUMBER OF ROUNDS FIRED PER PRACTICE, THE AVERAGE LEVEL OF DIFFICULTY and the SUCCESS SCORE.

The AVERAGE NUMBER OF (ASSESSED) PRACTICES PER SHIP undertaken is important because of the general philosophy that practice-makes-perfect, and the more practices achieved

by each capable platform necessarily indicates that the Fleet as a whole has acquired just that little extra experience that could be significant in any given tactical situation. The figure obtained must necessarily be averaged over the number of vessels in the RAN, CAPABLE OF FIRING, as opposed to those available for firing. Ships that have not exercised for one year because of overhaul must necessarily still be included in the averaging process because their non-availability is a reduction in the Fleet's readiness.

The average number of NON ASSESSED PRACTICES PER SHIP is also relevant to an overall readiness assessment because the reasons for non-assessment often are irrelevant to live tactical firing situations, and ships DO receive training benefit to varying degrees. Nevertheless they are NOT AS SIGNIFICANT as fully assessed weapons practice firings and consequently should have a lesser weighting than such firings. A nominal weighting of 0.5 has been allocated to these weapons practices.

The AVERAGE NUMBER OF ROUNDS FIRED PER PRACTICE is an indicator of the effectiveness of the practice and of such factors as the serviceability of the weapons systems throughout the practice, fluent operator drills and effective overall command and control.

The DEGREE OF DIFFICULTY is crucial to any assessment of Fleet Readiness, because scores which are based only on achieving good results against simple and predictable targets are almost meaningless in a live tactical situation, and do not allow for demonstration of the highest proficiency levels of gunnery systems' performance. GRADED PRACTICES carry different weighting factors which vary directly with the degree of difficulty of each practice. The AVERAGE LEVEL OF DIFFICULTY is the average difficulty of all assessed firings. The means of assessing difficulty is different for each of the three modes of naval gunfire, as will become evident.

The SUCCESS factor is the most obvious criterion for inclusion in any assessment of operational readiness, because it represents the yardstick by which the performance of all the contributing elements to a weapons practice firing are evaluated. They include the organisational skills which enable firing areas to be promulgated, together with the flying and seamanship skills which enabled the targets to be provided. They also include the facets of pre-firing system checks and the preparation of the recording equipment necessary to enable a full assessment of the firing practice to be carried out. Lastly and most significantly, the firing ship, its command and control and its combat system(s) must all perform in an integrated fashion in order to deliver projectiles to within the designated vicinity of the target.

The inclusion in this Figure-Of-Merit of gunnery weapons practice firing results summaries as discussed, can be achieved through the use of the following formulae which utilise the terms, GUNAA for anti-aircraft assessments, GUNNGS for naval gunfire support, and GUNSUR for surface gunnery assessments.

Anti-Aircraft (GUNAA)

No. of practices = PRACTAA
No. of practices NOT assessed = PRACTAANA
No. of rounds fired = FIREDAA
Degree of Difficulty = DIFFAA
No. of ships = SHIPSAA
Success (Assessed firings only) = %TTB

The DIFFICULTY factor for AA assessment is a function of the defined graded practices, and is a number in a scale of 1 to 3 , but of course can be larger for tactical firings in either exercise or combat situations.

The SUCCESS factor, %TTB (average), refers to the percentage of Target Triggered Bursts achieved by the Fleet as a whole. The suggested formula which simply inter-relates these individual factors to create an annual numerical indicator of anti-aircraft gunnery performance is;
GUNAA = [(PRACTAA/SHIPSAA) + PRACTAANA/(2*SHIPSAA) + (FIREDAA/PRACTAA) + (%TTB)] × DIFFAA

Naval Gunfire Support (GUNNGS)

No. of NGS Practices NOT ASSESSED = PRACTNGNA
No. of NGS Practices ASSESSED = PRACTNG
No. of Rounds Fired = FIREDNG
DIFFNG = Degree of Difficulty = 100/Average time call to ready (secs)
No. of ships = SHIPSNG
Success = %FFE

The SUCCESS factor, %FFE (average), refers to the calculated mean percentage Fire-For-Effect in the target area.
GUNNGS = [PRACTNG/SHIPSNG + PRACTNGNA/(2xSHIPSNG) + FIREDNG/PRACTNG + %FFE] × DIFFNG

Surface (GUNSUR)

No. of Surface Practices NOT ASSESSED = PRACTSUNA
No. of Surface Practices ASSESSED = PRACTSU
No. of Rounds Fired = FIREDSU
No. of ships = SHIPSSU
Success = No. of Hits.

DIFFSU = [SU(x) + BRKT/10000] *0.5 where SU(x) is a number in a scale of 1 to 3 representing a graded surface practice, (or larger for tactical firings), and BRKT is the centre of the range bracket in yards.

GUNSUR = [PRACTSU/SHIPSSU + PRACTSUNA/2xSHIPSNG + FIREDSU/PRACTSU + HITS] × DIFFSU

** The overall contribution to the Figure-Of-Merit from gunnery weapons practices is thus;

*** GUNNERY = GUNNAA + GUNNGS + GUNSUR

There is no upper limit to this or any other component of the Figure-Of-Merit, which allows for many of these parameter values to markedly increase as they would be expected to for comat situations.

Missiles

Missile weapons practice firings, as for gunnery firings, can be readily classified into anti-air (AA) and surface (SU) evolutions, but two additional classifications also exist. They are anti-submarine (AS) missiles and sub-surface launched surface (SSLSU) missiles. The methods of assessment of each type of weapons firing are different, and therefore the individual practices cannot be lumped together. For each missile type within these defined categories, separate contributions to the Figure-Of-Merit should be evaluated, for example SEACAT and STANDARD missile firing analyses should not be combined in the first instance.

Relevant parameters for analysis are; the NUMBER OF MISSILES FIRED, the NUMBER OF SHIPS FITTED WITH THE MISSILE SYSTEM, the SUCCESS rate, the NUMBER of firings NOT DETERMINED, and a DIFFICULTY factor. The rationale for use of these parameters is essentially as already described for gunnery systems.

For ANTI-AIR MISSILES (MISSAA), the criteria for success is usually whether a target has been destroyed, or if the missile has undergone a satisfactory fusing operation within damaging distance of the target.

The DIFFICULTY factor is a function of target(s) profile, and whether more than one missile was intended to be fired.

For ANTI-SURFACE MISSILES (MISSSU), which includes anti-air missiles used in the surface mode, as well as missiles designed for and operated exclusively against surface targets, the criteria for success is usually whether the missile has impacted on the target, or at least undergone a satisfactory fusing operation within damaging distance of the target.

The DIFFICULTY factor is a function of the method of targetting, and of the range of the target at firing.

For ANTI-SUBMARINE MISSILES (MISSAS), which includes all missiles which deliver a weapons payload to a submarine target, (not including torpedoes launched from a manned platform), the criteria for success relates to whether the delivered ordnance meets the criteria for an assessed hit on the target.

The DIFFICULTY factor is a function of whether other allied naval or air assets are involved in the anti-submarine action, and of the submarine range at the time of engagement. A greater range scores a higher weighting factor.

For SUB-SURFACE LAUNCHED ANTI-SURFACE MISSILES (SSLSU), which represents those missiles that are launched from submarines against surface vessels, (not including torpedoes), the criteria for success is whether the missile has impacted the target or undergone a satisfactory fusing operation within damaging distance of the target.

The DIFFICULTY factor is a function of the submarine attack scenario, and includes the range at which the missile is launched.

The contribution to the Figure-Of-Merit from missile weapons practice firings is;

*** MISSILES = MISSAA + MISSSU + MISSAS + MISSLSU,

where each of these terms is defined in similar fashion to the component terms described for "GUNNERY".

Torpedoes

Torpedoes are launched by all three primary categories of weapons platforms, that is submarines, surface vessels and aircraft. The latter two launch their weapons primarily against submarines, whilst submarines have both surface and sub-surface targets. Not included in this category are torpedoes borne by anti-submarine missiles such as IKARA, because those weapons are assessed as part of the evaluation of that higher level weapons system.

For SURFACE LAUNCHED TORPEDOES (TORPSLT), AIR LAUNCHED TORPEDOES (TORPALT), and SUB-SURFACE LAUNCHED TORPEDOES (TORPSSLT), the SUCCESS factor considers whether the torpedo acquires its intended target and concludes its homing phase in a manner which is adequate to activate the explosive fuse(s).

The DIFFICULTY factor correlates the tactical or non-tactical nature of the firings, as well as the nature of the target scenarios.

As for previous parameters the equation relating the contributions of the three torpedo categories to the overall Figure-Of-Merits is;

*** TORPEDO = TORPSLT + TORPALT + TORPSSLT,

Non Firing Systems Assessments

This type of routine ship assessment refers to the combat systems' practices which do not actually involve the live firing of weapons. Such practices nevertheless can be assessed using ship collected records such as computer magnetic media and cameras or video equipment. Air Defence exercises, which exercise the full Command Team as well as the ship's fitted systems, are a good example. Essentially any system which will allow an engagement to be simulated can be evaluated in this way.

These types of exercises are valuable for inclusion in the Figure-Of-Merit because many more of them are undertaken than live weapons firings, and the resultant larger data base better allows conclusions to be reached which have a sounder statistical basis. They also can help to explain trends which may be observed in the live weapons practices, such as a run of unsuccessful missile firings; — a similar proportion of poor quality air-defence exercises could indicate a real problem in either the personnel or systems areas, or in both!

Non Firing practices which should be assessed regularly and included in this Figure-Of-Merit are;

* — Air Defence Exercises in Automatic Combat Data System fitted ships, (ie. simulated surface to air missile engagements),
* — Aircraft Tracking Exercises, for all AA gunnery systems,
* — Simulated surface to surface missile engagements and,
* — Simulated torpedo engagements,

from all types of weapons platforms.

SUCCESS for these engagements would usually require determination of whether the aims of the exercise were achieved, for example whether the simulated missile engagement actually engaged the target(s) within a particular range bracket, or within a particular time period after first detection. Similarly, recorded aircraft tracking runs could be assessed as satisfactory if the aircraft was tracked over the required range bracket, and the gun point of aim relative to the target was within specified tolerances. The term used to represent these assessments is NONFIRE.

Non Ordnance Systems Assessments

There are many other ships and submarine systems that are crucial to operational performance, besides the actual weapons systems which can go "bang". Included in this category are surveillance radars, navigational aids, aids to air navigation, communications systems, propulsion systems, and last but not least the domestic systems necessary to satisfy the habitability expectations of ships' companies.

Most of these systems are routinely assessed at least once in a ship's commission (of about four years), and each assessment conducted during any particular calendar year would contribute a valuable overall appreciation of the general standard of these valuable support equipments.

For the RAN, its dedicated trials organisation co-ordinates these measurements for all ships emerging from refit, or overhaul, and also for those systems checks which require more frequent testing, such as TACAN (air navigation beacon).

The result of these assessments is usually presented as the system being SATISFACTORY or UNSATISFACTORY. The contribution to the Figure-Of-Merit of these assessments would most flexibly be provided as — "the percentage that were SATISFACTORY in the past year". Thus:

*** NONORD = [no. successful VCDs + no. successful COMSOTs + etc.]/total no. of all measurements,

where for this example the two component parameters mentioned are,

VCD = Vertical Coverage Diagram Measurements, and COMSOT = Communications Systems Operability Trials

Missed or Deferred Serials

The number of missed or deferred serials, for whatever reason, is an indication that operational readiness can be improved. If a ship or aircraft misses a serial because it has systems defects then that obviously has direct relevance to preparedness for any contingency. If, on the other hand, a serial is missed because the headquarters programmers have mistakenly made an programming error, then that deficiency is more subtle, but nonetheless relevant to the total RAN effectiveness analysis.

This parameter is necessarily a negative number and is presented thus;

No. of missed serials = MISSEDSER
No. of participating Fleet Units (including RAN & RAAF AIRCRAFT) = UNITS
Average Missed Serials = MISSED
**** MISSED = − [MISSEDSER/UNITS]

This equation deliberately reduces the significance of missed serials for larger numbers of participating units.

Length of Time to Repair Significant Defects

The average length of time taken to repair significant defects, (ie URDEF's (URgent DEFects), is a measure of a number of RAN

organisational parameters. It reflects upon the ships concerned firstly, and their ability to undertake repairs themselves, or else to co-ordinate repair support. In the latter situation it also reflects upon the shore technical support organisations such as Intermediate Maintenance (FIMA), and the Depot Level Support provided by dockyards and contractors.

In each of these activities, Naval Stores Supply Support plays a key role in providing the necessary components to enable system repair, and if spare parts are not quickly available this fact will be represented in a large average duration for rectification of significant defects.

Additionally, it also reflects upon the ability of Fleet Headquarters personnel to manage the Fleet assets, in some cases, by allocating priorities which necessarily delay repair action. For example some defects remain current because Fleet Units are considered to be more valuable at sea achieving national and/or operational goals which have a higher priority than defect repair; a conscious decision which relegates defect repair temporarily to relatively lower operational priority. For this particular example the negative effects of delaying defect repair would be compensated for by the positive effects on the "missed serials" parameter. This parameter is necessarily a negative quantity. The relevant equation is thus;

No. of URDEF's raised in a year = TOTALURDEFS
No. of Fleet Units = TOTUNITS
Average Repair Time = REPAIRTIME
*** REPAIRTIME = – [TOTALURDEFS/TOTUNITS]

Total Sea Days

Operational proficiency is believed to be directly related to the average number of days spent at sea by Fleet Units. Once again the concept of practice makes perfect is applied and is believed to be universally valid. the relevant equation is;

*** SEADAYS = [TOTALSEADAYS/FLEETUNITS],

where;

TOTALSEADAYS = the total number of days spent at sea by all Fleet Assets, and FLEETUNITS = the total number of Fleet Assets in the RAN, not necessarily limited only to those which actually went to sea.

Total Flying Hours

Total Flying Hours like the parameter Total Sea Days relates greater capability to a greater number of hours flown. This term refers to RAN Air Assets and those RAAF assets which are tasked in support of Fleet Exercises.

Total number of hours flown = TOTALFLYHRS
Total aircraft inventory used to support The Fleet = TOTALAIR
*** FLYHOURS = [TOTALFLYHRS/TOTALAIR]

where FLYHOURS is the average hours flown by the available air assets.

Formal Inspection Reports

Formal Inspections of Fleet Units are conducted by Fleet Headquarters personnel, in some cases as part of the general progression of Fleet Units towards a "worked-up" or operational condition. Inspections which fall into this category are, "safety inspections", including "lighting off examinations", "fast-cruises", "work-up progress evaluations", and lastly, "operational readiness evaluations".

The one significant Formal Inspection which is not a component of the development of a ship towards operational status, is the "Admiral's Inspection", which combines a formal walk-around and ceremonial divisions, with Fleet Staff Departmental Assessments. These departmental assessments aim to certify the administrative procedures of the individual departments which comprise the organisational structure of all RAN vessels.

Each inspection within the categories just described can be assessed as either SATISFACTORY or UNSATISFACTORY at the first presentation, and when combined together present an indicator of the level of achievement of the Fleet towards the standards required for Formal Inspections. This indirectly is also a measure of the standards set by Fleet Staff, and if they are in opposition to trends observed elsewhere in this Figure-Of-Merit, that fact will become obvious.

No. of satisfactory safety inspections = SAFETYINS
No. of satisfactory fast cruises = FASTCRUISE
No. of satisfactory work-up-progress-evaluations = WUPE
No. of satisfactory operational-readiness-evaluations = ORE
No. of satisfactory departmental assessments = DEPARTMENTS
Total no. of formal inspections of all types = TOTINSPECT

FORMALINSPECT = [SAFETYINS + FASTCRUISE + WUPE + ORE + DEPARTMENTS]/TOTINSPECT,

where FORMALINSPECT = the average number of satisfactory assessments for formal inspections of all categories.

Personnel Factors

The Royal Australian Navy, as with any large organisation, is necessarily dependent on its personnel for its overall character and for the achievement of its aims and objectives. Operational Readiness is THE primary aim and objective, and three personnel related parameters have been identified as being integral to this consideration of a Figure-Of-Merit. They address TRAINING levels, overall MANNING levels, and the EXIT-RATE of personnel from The Service.

Ratio of Trained to Incompletely Trained Personnel

Specialist training is generally regarded as being the quickest way to bring personnel to a level of readiness whereby they can be effective in the performance of their tasks, as opposed to not having that specialist training and relying instead on learning on-the-job. Whilst on-the-job learning can be effective in the long term it usually does take longer than specialist pre-joining training to reach a particular standard, and unless well supervised, often leads to the development and propagation of bad practices. It also requires personnel to remain in one job for longer than is the RAN norm, in order to have the time to develop proficiency on-the-job.

Having a high ratio of fully trained personnel to incompletely trained personnel, (ie. not having completed all pre-requisite courses for the billet they are occupying), IS relevant to Force Readiness and deserving of inclusion in this Figure-Of-Merit.

The mechanism of achieving the data ratio is best accomplished in the personnel administrative headquarters, which for the RAN is Navy Office. There the use of a readily available relational data base will enable the appropriate records of The Director of Sailors'/ Officers' Postings, and The Records of Training and Employment, to be painlessly maintained continuously, such that the ratio could be extracted whenever it was needed. Maintenance of such a data base would considerably enhance the tasks of the Director of Sailors' Postings and the Director of Naval Training and contribute to more effective management of Fleet personnel in particular.

The resultant ratio muliplied by 100 would be known as; PERSTRAINING, and would be a percentage.

******** PERSTRAINING = (COURSESHELD/ COURSESREQD) × 100 **********,

where;

COURSESHELD = the number of required courses for all RAN billets, ACTUALLY HELD by the billet occupants, expressed as a large number, and

COURSESREQD = the number of required courses specified in the complete schemes of complement for all RAN Ships and Establishments, expressed as an even larger number.

Ratio of Numbers Borne to Numbers Billeted

The number of billets or defined positions vacant in any organisation, is a factor in determining how capable that organisation is likely to be in performing the tasks which caused those billets to be defined in the first instance. Some vacancies can be tolerated in times of low levels of mobilisation, (ie. peace), but an index which reflects manning levels against defined action requirements is a definite component of a Figure-Of-Merit for Navy Operational Readiness. The relevant parameter is labelled;

PERSMANNING, and is a percentage.

******** PERSMANNING = (PERSBORNE/ PERSCOMPLEMENT) × 100 **********,

where;

PERSBORNE = the number of personnel borne in the RAN, and

PERSCOMPLEMENT = the number of personnel complemented for in the RAN.

Personnel Exit Rate

Experience of personnel borne in any organisation, be it civilian or armed service, is a valuable but somewhat esoteric asset. Its esoteric nature arises from the difficulty in determining whether the average experience level remains static when personnel exit the organisation and are replaced by others progressing through the training "pipeline"? Experience necessarily is a function of a wide variety of subjectively valued parameters, too many to consider in detail for a topic such as this. What can be considered however is the exit rate from the organisation.

The exit rate is a very broad indicator of the relative experience levels in an organisation, from one year to the next. It also reflects other functions such as the general community economic situation, and the relative pay and conditions of personnel within the organisation, but for the purposes of this paper, its relevance is restricted to the desirable fact that lower (rather than higher) exit rates indicate that experience and expertise is being developed and retained in the organisation.

This parameter for the RAN is labelled; PERSEXITS, and is a percentage.

********* PERSEXITS = (PERSLEAVING/ RANPERS) × 100 **********,

where;

PERSLEAVING = no. of personnel leaving the RAN in a particular year, and

RANPERS = no. of RAN personnel.

Ammunition Stocks

The quantity of ammunition held for a navy's weapons systems is an indicator of many factors, some political and some economic. In a most basic sense RAN assets will be constrained in any conflict by the quantity of available ammunition; which is a function of stocks immediately at hand, as well as the lead-time to manufacture or purchase additional stocks.

For each envisaged tactical scenario an estimated ammunition useage rate can be compiled for the nation's defence forces. If the lead-time to replace that ammunition in each scenario is greater than the estimated time taken to expend available stocks, then the nation would be at a disadvantage, and must therefore place greater emphasis on choosing a strategic path which, if it failed, would not see its defence forces committed to tactical situations likely to require greater than the available ammunition.

The nation's strategic options must thus necessarily be constrained where its defence forces are concerned, by the stocks at hand of ammunition. In that sense, without considering the influence of lead times, the operational readiness of the Navy bears a direct relationship to the quantity of ammunition available, and warrants inclusion in this Figure-Of-Merit. The term to used without definition is;

********** AMMUNITION **********

Figure-Of-Merit

There are many ways to combine the influences of each of the parameters described thus far, including the allocation of weighting factors to emphasise the importance of one particular parameter over the remainder, however for simplicity and ease of illustration, each of the component parts of this Figure-Of-Merit will be combined arithmetically. The Figure-Of-Merit for RAN Operational Readiness, which could give an annual indication of whether the RAN was more operationally "ready" than say two years previous, is thus;

FIGOFMER = GUNNERY + MISSILES +
TORPEDOES + NONFIRE +
NONORD + MISSED +
REPAIRTIME + SEADAYS +
FLYHOURS +
FORMALINSPECT +
PERSTRAINING +
PERSMANNING +
PERSEXITS + AMMUNITION

where FIGOFMER is a dimensionless number. The higher the number, the higher the operational readiness.

Not all aspects of RAN operations have been included in this "sample" equation of the Figure-Of-Merit, but those that are missing such as amphibious and minehunting operations, can be defined in terms similar to those used here and included with appropriate weighting factors.

Such a simple arithmetic equation tends to belie the considerable effort involved in collecting and assessing the raw data in the first instance, but by far the most difficult part of the task, that of weapons practice firing assessments, is already routinely undertaken. The remainder could similarly be compiled with little effort and the provision of some basic computing facilities.

CONCLUSION

The concept of using a Figure-Of-Merit to act as an indicator of Operational Readiness is believed to be valid. The discussion of this article shows how the multifaceted term Operational Readiness can readily be reduced to component parts which can be defined and weighted to reflect different degrees of relative importance.

The collection and processing of the raw data which forms this arbitrary, but rationally considered numerical definition of Operational Readiness, can readily be achieved without an increase in personnel resources because for the RAN, it is mostly already available. Its routine collection would in some cases however, require procurement of relational data base computer software and the appropriate hardware on which to run it.

The data itself is too diverse to easily enable a dynamic "readiness" figure to be available from day-to-day, but the annual compilation of Naval (or any force) readiness would be quite achievable.

The merits of having an indicator such as this Figure-Of-Merit for Operational Readiness, assuming that its definition is broadly accepted, are that;

* there would be increased objectivity in Naval Readiness assessments, and consequently
* proposals for new equipment, personnel and logistics support policies could more readily be substantiated, plus for those in the media who were allowed access to the annual assessment data, there would be,
* more informed and reasoned Defence debate.

THE USE OF RESERVES IN BOTH PEACE AND WAR

LCDR R.M. JONES RANR

'The (Australian) Citizen Naval Forces should form a very valuable reserve, ready at a moment's notice to take up such duties as are required of them, and for which they have been specially trained in peace'

Admiral Jellicoe, 1919.

The Dibb Report (1) and the 1987 Defence White Paper (2) express renewed confidence in Australian reserve forces. Both documents acknowledge the advantages of training reserves for certain defence tasks and have raised the defence community's awareness of reserves. This is not an entirely new phenomenon; the ADF has a record of regularly discovering the value of reserve forces and has established an interesting, if patchy, record of reserve involvement. The start of another cycle of participation in ADF activities is a good time to consider ways of making the most of reserve involvement. While the Army reserve receives the lion's share of ADF interest there is an important role for naval reserves and this essay will concentrate on the fundamentally different set of problems met by the Australian naval reserve force in the later part of the twentieth century.

The primary characteristic of the RANR is the membership by men and women who serve part-time; civilian occupations take up their working days and naval training, or service, is a spare-time activity. The considerable benefits available from training civilian naval forces as an expansion force, and to augment permanent forces, have long been recognised but there can be tendency among regulars and reserves to assume that part-time naval personnel can perform remarkable feats with very little training or experience. In some respects naval reserves have been touched by a popular belief based in the Anzac legend that the Australian is a natural fighter who needs only a minimum of equipment to become a great warrior. The naval reservist is sometimes endowed with unreal qualities and, instead of drawing on and enhancing reserve strengths to the mutual advantage of permanent and citizen forces, there is a tendency to blur the very real difference between reservists and permanent personnel, and to avoid facing up to the limitations inherent in citizen naval forces. Consequently, best use is not made of the dedication and interest of the citizen navy.

Since Australian defence decision making has a natural tendency to reach similar conclusions, when faced with similar problems, it is not suprising to discover that Australia has been through this cycle of renewed inerest in reserves at least twice before. This prior experience is a mixed blessing. We can learn by experience, but we can only learn valid lessons if events have been truthfully recorded and are interpreted without bias. If perceptions and beliefs about the past are distorted by folklore or half-truths then more harm than good may come from uncritically accepting beliefs about the past. Strongly-held, but distorted, perceptions can override hard-headed analysis based on the current situation; the need to avoid preconceptions is particularly strong when dealing with RANR history.

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HISTORICAL OVERVIEW

When the citizen naval forces were established under the Naval Defence Act 1910, the organisation was in two distinct parts. One was the RANR (O) containing boys undergoing compulsory training as cadets and who would, with time, form a pool of navalised civilians ready for mobilisation. Simultaneously there was an awareness that many existing reservists, enrolled and trained in colonial naval militia, were of eneven quality; they were placed in a segregated branch, known as the RANR (M), to which there would be no recruiting and which would be allowed to fade away. This decision, that the existing naval reserve force would be allowed to wither away, can only have been based on an assessment that this arm was not particularly useful.

During the First World War, wariness of reserve capabilities underlay Naval Board policy that reserves would not, as a general rule, be sent to sea in RAN warships. As if to emphasise this limitation, the RANR was renamed the Royal Australian Naval Brigade and directed to perform numerous tasks ashore and in defended ports and harbours (3). This was a vital task. The Examination Service, organised before the war, detained eleven German merchant ships before they could sail from Australian ports and captured another eight ships arriving in Australia unaware that war had broken out. These captures were a strategic loss to the German war effort and an important step in reducing her freedom to use the ocean: they were also a considerable gain to Australia as many captured ships were used for trade between Australia and Britian later in the war.

A.W. Jose, the official historian of the RAN in the 1914–18 war, appropriately described the Naval Brigade as the policemen of the Australian coast (4). In that phrase he aptly summarised the different roles of the permanent and civilian forces. Permanent naval personnel manned Australian warships but, apart from a small number of Reserve officers who gained merchant marine qualifications before the war and 269 members of the Naval Brigade serving as gun crews in merchant ships, reservists were restricted to minesweeping and patrolling (7%) and shore service such as the Examination Service (84%) (5). The RANB also performed a useful task in the Naval Bridging Train raised to perform engineering and pioneer tasks on the Western Front. The Train was diverted to Gallipoli and served at Suda Bay then served along the Suez Canal until the Turkish threat to that vital waterway eased. When the Bridging Train disbanded those personnel not willing to transfer to the Australian Army returned to Australia (6).

Reserves were not used in the permanent navy because of a feeling that they were not adequately trained for service in warships. While the Bridging Train was seeking further employment in the Middle East, RAN destroyers in the Mediterranean were desperately short of men but the Naval Board would not allow volunteers to transfer from the Bridging Train into the RAN to join the destroyers because Brigade members were not properly trained, i.e. they were not former members of the RN or RAN (7). The destroyers' need for men was relatively unusual and, because the RAN did not expand significantly (1450 increase between August 1914 and June 1919), the Naval Board was not under pressure to find additional manpower for the warships and could afford the luxury of insisting that all men serving at sea had completed full naval training.

In 1919 Admiral of the Fleet, Lord Jellicoe of Scapa, visited Australia, at the invitation of the Australian government, to advise on the future development of the RAN. In his comprehensive report dealing with every aspect of naval affairs he was brutally direct. When reporting on the citizen naval forces he wrote (8),

> 'Hitherto this force has not been fully utilised for naval purposes, and full advantage has not been taken of its immense potential value. It has not, therefore, been sufficiently recognised ... The policy of the Naval Board has been to use the Royal Australian Naval Brigade for shore service, as opposed to sea service, ... It is considered that this policy is wrongly directed, having regard to the probable requirements in future naval warfare, in the light of the experience of the past war.
>
> ...The Citizen Naval Forces should form a very valuable reserve, ready at a moment's notice to take up such duties are required of them, and for which they have been specially trained in peace.'

Jellicoe also recommended a major expansion in RAN ship strength which overshadowed the rest of his report. Although the expansion programme was quickly put aside, most of Jellicoe's organisational and administrative recommendation were implemented without his authorship being acknowledged (9). His recommendation to train reservists for sea service was implemented in the early 1920s and the RANR became responsible, among other duties, for harbour defence

work as well as augmenting the permanent crews of destroyers, cruisers, armed merchant cruisers and auxiliaries (10).

During the 1920s the strength of the naval reserve increased steadily and older River class destroyers (HMA ships PARRAMATTA, YARRA, WARREGO, HUON, SWAN, TORRENS) were allocated to various ports. Reservists supplemented permanent navy steaming crews when the destroyers commissioned and went to sea for passage to a dockyard for annual maintenance. The minesweeping sloop HMAS MARGUERITE voyaged from port to port as a travelling training aid embarking drafts of reserves at each port for minesweeping training.

The searcher for lessons in this considerable reserve activity in the 1920s must not forget that the organisation was underpinned by compulsion and by a limited aim. Governments of the time were so convinced of the value of citizen forces that legislation enforced attendance at reserve training. This compulsion applied first at the age of 14 when boys were selected for the junior cadets (naval or military) before graduating into senior cadets then into the adult reserve. Several years of compulsory cadet training ensured that entrants into the adult reserve were well trained in basic naval skills. It also ensured that the government aim of creating a pool of citizens with basic naval skills to man ships in reserve was met. When compulsory training reached its peak in 1928–29 there was 7172 reserves and 4959 members of the permanent navy (11).

The depression at the end of the 1920s severely affected the naval reserve. Training destroyers were withdrawn to Sydney for scrapping and MARGUERITE paid off leaving no training ships. When, at the end of the decade the Scullin government removed the element of compulsion as a matter of policy without consulting the Defence Department (12), numbers plummeted by two thousand in a year. There was slight recovery from 1932 onwards, and the RANR remained numerically larger that the permanent navy until 1937, but the main interest in Australia during the 1930s naval re-armament was in the permanent force: by February 1939 RANR strength was 73 per cent of RAN strength (13).

A remarkable expansion in citizen naval force strength occurred in the Second World War when members of the RANR, the RANVR and the Auxiliary Naval Patrol performed a multiplicity of tasks. Reservists again manned the Examination Service harbour patrols, as they had in the First World War, but unlike that war, reservists played a significant part in manning ocean-going warships. The Bathurst class minesweepers (generally known as corvettes) performed just about every conceivable naval task with mainly reservist crews and there can be no doubt the Australian naval forces would not have been able to achieve as much as they did without reserve personnel.

While the considerable wartime achievement of the citizen navy cannot be ignored and these men can rightfully point to the proud accomplishments of accountants, grocers, bankers, and the like in the naval profession, the lesson to be drawn can easily distorted. The strength of the citizen forces by 1945 was 28831 (14) yet in February 1939 total citizen force strength was 4315 (15) so the great reservist wartime feats were not performed by members of the pre-war citizen naval forces but men who had joined during the war. That is, by 1945, the citizen naval force was composed mainly of men who had been trained on a full-time basis after the war had begun. Most wartime entrants into Australian naval forces were placed in reserve components for administrative ease in demobilization, i.e. they signed on for the duration of the war, but were trained to permanent navy standards. Gill describes about 400 per month entering the RANR in 1942 for a initial 20 week training course at Flinders Naval Depot (16). Deductions drawn from the wartime RANR's competence will be invalid if the assumption is made that this service was based on peacetime training. It was not.

There are important lessons in these events. One is that citizen forces proved they could operate warships in action; but the equally important lesson is that the reservists had to be trained to that task and needed far more normal peacetime training to be effective crew-members.

Judging by the RAN attitude to the citizen naval forces there were no illusions about reserve readiness. Australia's post-war defence policy singled out the RAN as the first line of defence to be ready for immediate active service while the Army and Air Force mobilised their reserves. There was no place for the citizen naval force in this scheme because reservists could not be mobilised quickly enough (17). Not until 1950, when grave personnel shortages were retarding naval expansion, was the RANR re-established.

The RANR's role was to augment the RAN in peace war. Circumstances were particularly favourable for a policy of rapid naval expansion using the citizen force. Many RANR members had wartime service and needed only continuation training to maintain currency while RAN ships had accommodation for reservists. As well, there was a surplus of ships available for training at minimum capital cost; these same ships could be re-activated for reserve manning on

mobilisation. Additionally, naval warfare had not yet felt the full impact of the new technology unleashed by the recent war at sea; most crew-members could remain effective, after substantial basic training with a few weeks a year at sea and weekend training.

Underpinning this RANR organisation was, again, compulsion. Naval National Service, introduced in 1951, required men selected for the Navy to undergo several months of full time basic training then remain in the RANR for four years. While this procedure was different in detail to that of the 1920s the underlying aim was identical; to provide sound basic training during compulsory service to form a community pool with basic skills. In both cases the provision of officers and senior sailors to direct the reserve sailors was less important; there was a special category of reserve officers, known as the RANR(S), composed of men with merchant navy qualifications who were expected to lead the RANR sailors.

The general aim of augmenting the RAN in the 1950s appeared realistic and for the reasons mentioned, it probably was. But this unspecific aim robbed the citizen naval force of special status or skill in which it could take special pride. Simultaneously, the broad aim established for the citizen naval force meant that reserve training tended to be aligned with the permanent naval force (since the jobs were the same) and the compulsory basic training gave reservists a fair chance of attaining permanent navy levels of competence.

The end of Naval National Service Training in 1959 cut off the flow of recruits with sound basic training but the reservist was still expected to perform the same tasks as permanent navy personnel.

Lack of a specific RANR task to serve as a benchmark began to take its toll and the RANR slid into a limbo with inadequate training and an impossibly broad role based on a set of circumstances which no longer existed. Citizen naval force strength declined steadily from 7907 in December 1960 to 4226 in 1969 (18).

Attempts to rejuvenate the RANR in the early 1970s involved the allocation of specific tasks, such as the operation of patrol boats, to the RANR but the imposition of these tasks was not associated with rigid examination to confirm that RANR training and personnel policies could meet the tasks.

PRESENT CONDITION

The RANR is now in the unfortunate situation of having a widely accepted romantic tradition of wartime performance at sea which has tenuous links with reality but which drives the RANR to seek levels of skill and competence established for the permanent service. Differences between reservists and regulars are papered over in the belief that reservists can be equal to regulars in all respects while the very real and potentially beneficial distinctions are ignored. The drive to regard reservists as identical to permanent service personnel imposes unattainable goals on the citizen naval force while failing to make best use of the considerable talent available in the RANR.

This misdirected effort is more unfortunate because the need for a naval reserve force is greater than ever. The cost of training and maintaining regular personnel has reached such a level that, wherever possible, naval tasks must be devolved to fractional appointments; reservists are an ideal source of officers and sailors for short-term tasks lying within their expertise. This would apply even if the permanent force was not suffering the present high personnel loss rate when reservists are even more useful in making up postings shortages in the short term (and in the long term by transferring to the regular service). This general augmentation, useful as it is, cannot be regarded as anything other than an emergency measure until the permanent force solves current personnel problems because a Reserve as small as Australia's, in relation to the permanent force, can provide only a limited number on permanent transfer or for extended periods of continuous service. Peacetime augmentation of the permanent naval force is a useful role for the citizen naval force but must remain at a lower priority than wartime tasking when grave shortages of trained personnel will occur.

In any possible envisaged mobilisation of the ADF there are many tasks not needed in peacetime, for which considerable peactime training is not needed, but which become vital on mobilisation and which should be allotted to reserve. But considerable care should be exercised in selecting reserve roles. By definition, reservists have civilian careers in addition to naval ones; the civilian skills involved are often valuable to the Navy and steps should be taken to employ certain skills within the RANR on mobilisation — this will be most effective if peacetime plans have been prepared and some peacetime training completed towards the RANR task of ensuring that Australian naval forces can be mobilised speedily in wartime or times of defence emergency. The

organisation, structure and training of the RANR should be directed towards making best use of reservist's civilian talents and skills to achieve ADF aims.

FUTURE ORGANISATION

Australian reliance on citizen forces is traditional, but in the past, compulsion ensured an acceptable minimum training standard; the present drive to develop an effective voluntary reserve is a new departure in Australian defence history. Wartime experience has shown that citizen naval forces can competently operate warships but the same events showed that these reservists must be properly trained; this issue of training time and training standards is the most difficult problem facing the RANR.

The average reservist in the 1980s has an annual commitment of a certain number of hours per year for night and weekend drills and one period of about 12 days continuous training; this can be thought of as a total of 28 days service per year for the average member.

Most reservists must complete their basic and advanced training, as well as service to gain experience needed for advancement, in this modicum of time. Even if financial provision could be made for longer reserve training time there is considerable doubt whether many members could use the time in their crowded lives.

Training time limitations mean that citizen naval forces personnel should be selected in a different manner to that used in the RAN. Personnel managers in the permanent forces concern themselves with finding suitable recruits, then devising training and experience to match the person to the job. Training can be prepared with few time constraints and often lasts for months, sometimes for years, but this approach is not available to a reserve organisation which can use only the training time available. The idea of the average reservist undertaking a three or four month course for any reason is realistic — he or she does not have that time available — so personnel planning must be aproached quite differently. In this fundamentally different approach the citizen naval force personnel manager must critically assess limitations and strengths. The option of expanding training so the person matches the job does not exist; either personnel selection or the task must be altered. This idea that some naval tasks are beyond reserve capabilities is not really new (there are no RANR destroyer commanding officers) but is rarely accepted in planning.

There must be doubt as to whether any aim of maintaining ocean-going warships is still realistic. Australia no longer has a 'mothball fleet' of warships waiting for crews and the need for a trained naval pool in the community is no longer clear; to create and maintain a pool of navalised civilians would be a waste of resources unless preparations are made to supply ships for them to man in a time of need. A more realistic approach would be to plan for using reserves to release regular personnel from shore postings so the regulars can man any ships acquired after mobilisation.

Naval warfare has become immeasurably more complex. When the RAN and RANR were formed, the operation and maintenance of warships required large amounts of semi-skilled labour with a leavening of skilled personnel. C.E.W. Bean has left an interesting description of a stoker at work in a coal-burning warship of the time (19):

> *'One had thought of a stoker as piling on all the coal he could shovel at his own sweet will. In reality, the turn of his particular stokehold comes only ever seven minutes or so. Far up in the engine-room someone presses a knob — rings a gong. Somewhere down near the keel a man in a grimy woollen vest shovels open a furnace oor, shovels four spadefuls of coal blinking into the fierce light; clamps shut the door again. Opens another caged hell, and another, feeds and closes the four, four spoonfuls to each; wipes his brown, shining arms and neck, and waits quietly back in the dark for the next signal'.*

HMAS AUSTRALIA needed a large number of stokers to shovel coal at the stroke of a bell into her 31 boilers. Her 12 and 4 inch guns were also labour intensive and is not difficult to envisage a process by which a physically fit reservist of any civilian background could become an adequate crew-member in a short time. Modern warships are very different and require a skilled crew produced only by training and experience on a full time basis. Given these changes, a trend towards accepting that reserves with part-time training no longer have a place in ocean-going warships is inescapable.

This does not mean that naval reservists no longer have a place in the ADF. Far from it. Increased complexity of naval warfare has been matched by growth in demand for support facilities ashore — support such as operational headquarters, stores, workshops and training schools all have great scope for citizen force involvement. Indeed, the only cost-effective and

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workable way of expanding quickly to employ ships already in commission to their full potential will be by using reserves with relevant skills and peacetime training so they can be set to work immediately.

The RANR can be a genuine augmentation force only after a decision is taken on the precise purpose of having reserves. Many would say that reservists should be fully trained and ready to assume postings anywhere in the Navy immediately on mobilisation but that ideal situation certainly does not exist now. RANR personnel are not trained in the operation of destroyers, submarines or aviation; nor are they familiar with the intricacies of maritime warfare. With the shortage of accommodation for personnel under training in existing RAN warships, and the training time needed to absorb these complex subjects, there is no likelihood of reservists mastering these tasks in the near future. In practice, the attractive idea of the RANR being an all-round expansion base for the RAN is not possible within current equipment and training time limitations.

An alternative aim is to have a naval reserve which has been broadly trained to a minimum level in peace with the intention of augmenting that training, with specialist courses, on mobilisation. Specialist training could be slightly shorter in duration because of peacetime training but this option would absorb scarce manpower and other resources with little return in immediate availability of trained personnel in time of need. It is, on balance, not worth pursuing.

A third option is for reservists to be expert (or a least competent) in a narrow role assigned as their mobilisation task. This is close to the model in the RANR but without the limitations and advantages being acknowlegdged. Formalising a policy of RANR specialisation would provide a clear aim against which performance could be judged and against which the allocation of that scarcest of reserve resources, training time, can be allocated.

Extensive training needed for some tasks may rule them out as citizen force tasks at this stage, or they may be reserved for special categories such as ex-members of the permanent navy or those with special civilian skills. The over-riding purpose of this step is to ensure that tasks assigned to the RANR can be achieved in the training time available.

Matching tasks to training time will require careful appraisal of reservists' individual skills. If the ADF wishes to get the most from reservists it should take advantage of civilian knowledge and experience by differentiating tasks to suit the personal backgrounds of reservists to the extent of recruiting from selected civilian fields on occasion. Whenever possible the RANR should seek to exploit reservists' civilian training and experience by applying a topping of specialised naval knowledge to selected skills and thus achieve naval goals at minimum cost.

Definition of roles to be performed and experience or training needed to perform these roles is an essential step in using reservists; then a decision can be taken on how much training should be an entry requirement and how much will be naval training. Careful analysis will show that a large number of shore jobs in a mobilised and mobilising navy can be performed by reservists using civilian occupational skills enhanced by training. Such training must be rigidly objective to aviod wasting training time. Objectivity demands modification of the widespread attitude that reservists should be interchangeable in all respects with equivalent permanent personnel and that administrative tasks are essential in all-round naval development. In an ideal world reserve officers would, for example, be expected to have the same understanding of the stores system as regular officers. But that argument misses the point that, under present circumstances, training time limits ensure that non-specialist tasks, especially general administrative training, can be completed only at the expense of specialist training. The comparison must never be forgotten that two to three hour task for an average reservist is the same proportion of his annual workload as about a weeks work for a regular. As well, a two week naval short course represents a reservist's total annual spell of full time training or service and the course or period of service has to be carfully selected.

Training time limitations mean that individual reservists can never equal permanent personnel in naval knowledge. Any expectation that a reservists accummulating training and experience on a part-time basis can reach the same breadth and depth of knowledge as a member on permanent service flies in the face of logic or belittles permanent service personnel. Friction between permanent and reserve components would be eliminated if this difference was widely understood, but it would be even better if reserve units could concentrate on specialist training by having permanent or reserve personnel to act as yeomen or administrative officers, responsible for secretarial and administrative support. This personnel expansion, especially if allied with greater availability of basic naval and defence publications on service writing and organisation, would go a

long way to integrating reservists and regulars while helping reservists master their mobilisation specialisation.

Greater emphasis on training the trainers would also allow optimum use of reservists' naval time. The shortage of training time demands effective instruction but the limit of one short course per year means that formal instructional technique and training administration qualifications are not widespread in the RANR. Nor is it likely that reservists can undertake these important courses and simultaneously maintain currency in primary naval skills. But reservists designated as specialist trainers could regularly complete training courses then act as quality controllers, administrators, and training advisers. Availability of trained trainers within RANR units would be a significant help in attaining standards of operation.

The personnel management benefits of recognising specialisation in the citizen naval force are considerable, provided recognition is accompanied by effective methods and rigorous checks that standards are achieved. The fact that Naval Control of Shipping in Australia is primarily an RANR skill is a point of pride to NCS personnel and one reason for the noticeably high self esteem of that branch whose members know that expertise, in an important naval task, resides in the RANR. It would not be necessary for all citizen naval force tasks to be as uniquely reservist as NCS, nor would it be possible, but the idea that expertise can reside in the RANR has considerable merit, especially if it is a task which will not be needed until mobilisation.

MOBILISATION ROLES

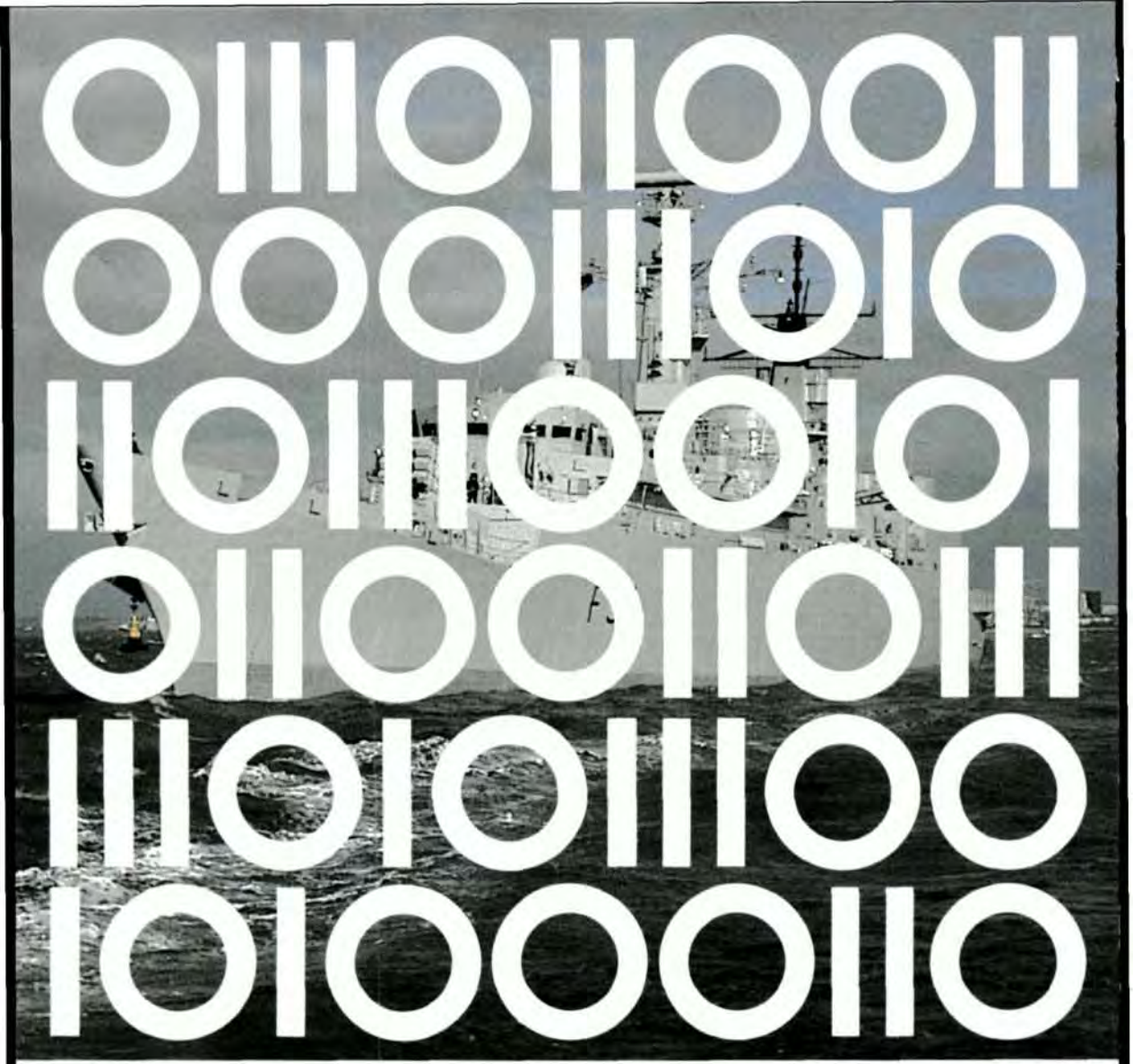
Not by choice but by circumstances the RANR is forced into adopting specialised roles which are essential, or at least important, in wartime but which can be maintained at a low level of activity in peacetime. To give reservists a sense of purpose there needs to be some formal posting planning — not necessarily to the extent of assigning reservists to mobilisation post as was done in the 1920s — but there does need to be planning to the exent of knowing that, for example, there are enough reserve personnel with appropriate skills and training to man Maritime Headquarters on a full-time basis once peacetime availability limits are removed. The task of completing MHQ manning (and that numerous other headquarters) represents a broad category of RANR mobilisation tasks which can be thought of as tasks needed under any mobilisation circumstances.

Many similar tasks can be envisaged, especially relating to port and harbour defence. Mine-warfare is an often discussed example and its not difficult to imagine a mine warfare and patrol vessel based at a reserve unit but designed and equipped to be self-sufficient and to operate anywhere using shipping containers as a transportable base. This would probably be the ideal example of an RANR role in which reservists would train to apply their specialisation on mobilisation to provide a service not usally needed in peacetime. It would also be a useful reservoir of naval skills which may have other applications. A quick survey shows a need for skills in seamanship, stores, victualling, engineering, weapons electrical, diving, explosive demolition, radar, navigation, operations, intelligence and communications.

Special requirements should be observed if this mobile port defence team is to be effective. Rigorous attention will have to be paid to matching people, skills and equipment so that anomalous situations in which reservists cannot attain the standards needed to operate their equipment are avoided. Such difficulties can be overcome during design of equipment and assembly of the team provided the attitude is adopted that equipment and organisations should be designed to suit uniquely reserve tasks. This is not as radical as it seems if we apply the principle of selecting equipment best suited for the role; since the port defence patrol craft will be a new type of naval vessel in Australia then a 'clean sheet' approach is not unreasonable. For example, the engine room arrangements of an RANR mine warfare and patrol vessel need to be designed for high reliability, low maintenance, ready availability of parts and for maintenance by a few people with predominantly civilian engineering skills. These requirements point towards engines more akin to those in a large fishing boat than in a naval patrol boat even if this means slightly lower performance.

CONCLUSION

Various factors combine to make RANR utilisation a complex problem with contradictory requirements. Undoubtedly the RAN needs reserves as an expansion base on mobilisation but the RANR is faced with the dilemma of needing far more training to prepare for ever more complex warfare while having available only 28 days per year for the average member's service and formal



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training. Loss of the period of compulsory service in which sound basic training could be completed has exacerbated the training problem. Even with the most careful husbanding of training time useful skills can be imparted only if the area of instruction is confined.

The dilemma of reduced training time and more complex tasks can be solved by concentrating training time on specialised tasks and by using skills acquired in a civilian capacity or during prior full-time service. While it may be nice to think of the RANR as capable of manning ocean going warships this will not be possible on mobilisation — increasingly the RANR's future as voluntary augmentation for the RAN lies in preparing for the numerous support tasks needed in a mobilising and mobilised navy.

The shortage of training time demands that the RANR be specialised to achieve narrowly defined mobilisation roles. Formal RANR specialisation has the considerable benefits of enhanced reservist self-esteem and a precise definition of training needed to meet clearly defined operating standards. Serious consideration should be given to helping RANR units make best use of available training time; attention to providing administrative support and competent training specialists would be worthwhile.

The RANR has a valuble role in the ADF as a mobilisation base for the RAN but the novelty of the situation where Australia is, for the first time, attempting to make serious use of the RANR on an all-volunteer basis has brought about its own problems to be overcome if the reserves are to make a genuine contribution to ADF capability.

Notes and Acknowledgements

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During his visit to Australia, Rear Admiral Hill addressed an interested gathering in Canberra, sponsored by the ANI, and kindly granted permission for its publication in the Journal.

MARITIME STRATEGY FOR MEDIUM POWERS

By
Rear Admiral J.R. Hill RN

What is a Pom, who's spent only a few days in Australia in his life, going to talk about that can concern you much? Are the defence problems of our two countries, at either end of the world, at all similar? Is there such a thing as a medium power anyway?

To answer the last question first, well, quite a few critics have picked it up and most of them have grudgingly admitted that there is such an animal although describing it is difficult. Perhaps we can do a bit better than that. Power is the ablility to influence events. A superpower is able to influence events in a comprehensive way, through economic clout, cultural influence and military activity. A small power can influence events by its own efforts in only the most limited way: ultimately, it lives under guarantee. But the states in between, they have to be brave as lions and as cunning as foxes because they do have some ability, some potential, and they have to choose how best to deploy it in their interests.

VITAL INTERESTS.

It's extraordinary how seldom these get stated in strategic documents; they haven't appeared in British Defence White Papers for many years, but then you are pretty lucky if they mention Britain at all in a strategic context; all the references are to NATO or Europe. But a medium power, if it regards itself as an independent sovereign state, needs to look carefully at its vital interests; and actually the irreducible ones are quite shortly expressed in the UN Charter: Territorial Integrity and Political Independence.

They are both, I think, more easily grasped in this great continent than in the old and complex set-up the other side of the globe; but the principles for safeguarding them are much the same. Territorial Integrity demands the security of frontiers, whether land or sea, and the military element is prominent. Political Independence is a much subtler matter, and requires a complex of economic and diplomatic measures backed by military power.

That doesn't exhaust the catalogue of vital interests for a medium power. For you can have territorial integrity and political independence and still be a pretty rotten place to live: I could name you a few, but not on the record. Most medium powers will look for the betterment of their peoples, and for that they need to participate on reasonable terms in the traffic of the world: its production, manufacture, trade, commerce and culture. That demands access to routes and markets. In sum, it is an undoubted vital interest to a medium power. Each individual fragment may not be thought of as a vital interest: but beware dominoes. Lose a bit here, a bit there, and suddenly it looks shaky.

THREAT

It's at this point, having defined vital interests, that one ought to start looking at the threat, and not before. Starting with the Threat is one of my particular betes noires. Threat to what, pray? To vital interests is the answer, so you must define the vital interests first. So where is the threat to the vital interests of a medium power? First, there's almost bound to be a threat from one or other of the superpowers. It may be laid a long way back, but in the nature of world economic, political and strategic systems it will be there. When such a threat becomes active, then a medium power is in big trouble. It will need to engage the other superpower on its side.

But there will be other threats, almost certainly, and they may be much more immediate than superpower threats. For many states, they will be directly across land frontiers. Many of the Latin American states have festering border disputes and Israel — which I do regard as a medium power, for reasons which I'll come back to in a minute — is embattled; but none of these is directly to do with superpower threat. For other states, threats are of a less absolute order: they are to do with discriminatory practices against trade or shipping, the knock-on form from other peoples' wars, nibbles at outlying dependent territories.

Now it's a fact of recent history, of history since 1950 I should say, that superpowers are increasingly reluctant to pick up the tab: certainly in local conflicts when non-superpowers are involved, and even when the other superpower is involved but their own vital intersts are not seen to be threatened. The Nixon Doctrine was simply an articulation of a process of thought that had been going on for some time; and the Brezhnev Doctrine, though at first sight showing a more interventionist policy than had hitherto been declared, in fact limited its scope to states already firmly in the socialist camp.

So what is a medium power to do. How is it to realise its military potential so that its vital interests may be safeguarded. In my view it must make itself able to do two things: to protect itself against threats where no help can be expected from elsewhere; and in enough strength, to convince the helper — typically, a superpower — that it must come in.

I sum this up in my book — and I promise not to refer to it often — as *to create and keep under national control enough means of power to initiate and sustain coercive actions whose outcome will be the preservation of its vital intersts*. You will of course perceive that 'means of power' and 'coercive action' don't confine themselves to military measures, and I should be the last to suggest that the exercise of power can ever be confined to the military field. Economic, diplomatic and even cultural measures are part of the process.

But before I leave it, I'd like to draw particular attention to two other words: 'national control'. It's in the nature of a medium power that its interests are not coincident even with those of its closest friends. There must therefore be no institutional power-of-veto on their part, and the medium power must have the ability to command its own resources in a crisis. The keyword is autonomy: not absolute, since this is the prerogative of superpowers and, arguably, is illusory even for them; but significant and sufficient.

By that token, you see, Israel does turn out to be a medium power. Tiny though it is, of very limited population and domestic product in world terms, it nevertheless harnesses enough resources — including, in its case, unique individual loyalties and sources of money outside its own frontiers — to maintain control of its own destiny.

How then does the general thinking which bears, as you'll already have detected, a striking resemblance to the 'self-reliance' which has been an increasingly prominent theme in your own defence policy over the past ten years translate into the maritime field.

First and of course, most importantly, the maritime element of strategy must be consistent with the rest of national strategy. I doubt if it was ever right to talk about 'a maritime strategy' or 'a continental strategy'; even in the days of the elder Pitt, Britain took a very close interest in the continent of Europe and tried to ensure a balance of power there — by way of subsidy if not of expeditionary forces — while her *predominantly* maritime strategy established Britain's primacy overseas. Nowdays even that level of emphasis is not open to many medium powers. There is a distinct maritime element nonetheless, and it has its own special character.

Because the tools of the medium-power strategist's trade are, it seems, sharper and better defined when you are talking about the sea, I'm talking here of conceptual tools of course — the material we shall reach later.

DETERRENCE

What then are the concepts a medium power can use to guide it in the best use of limited resources to preserve vital interests at, and by sea. First, of course, there is the very general idea of deterrence: sufficient strength to convince a potential opponent that military action will be unprofitable for him. The strength need not be all military, need not be all national; but as I've implied, the medium power is constantly in the position of having to assess how much it can rely on allies and on non-military means of coercion.

SEA USE AND SEA DENIAL

Then there are the purely sea-related concepts of sea use and sea denial. Most developed nations tend to want to use the sea; indeed the ability to use the sea is one of the most satisfying definitions of sea power. If they want to use it against opposition, they must be prepared to protect such use or harness allies in its protection. Sea denial is a sharper thing, but it is more generally applicable than one might at first think; how about fiscal and immigration control, let alone the ability to defeat a threatened military invason.

But those concepts, of deterrence, sea use and denial, are not of much use in the management of limited resources without further ordering. Well, of course you can then use scenarios to develop your military organisation. But scenarios have often proved faulty in the event, and can produce such inflexible force structures, that in my view they are largely discredited as a basis for military planning. You can of course use them to test force structures

that have been evolved using other processes, and that, I believe, is their proper function.

The further ordering that is needed lies rather in two other sets of concepts: those of Levels of Conflict and of Reach.

LEVELS OF CONFLICT

Now you can complicate anything ad nauseam if you want to, and when dealing with levels of conflict it's quite easy to get into artificialities like Herman Kahn's 39 steps in the ladder of escalation. So let's try to keep it simple and elegant and think of four levels of conflict only.

The first I call *normal conditions*. It would be nice to call it peace, but it wouldn't be accurate because normal conditions in international relations are more those of compensated tensions than of true peace. We can descibe normal conditions though: change occurs in a controlled way aided by processes of negotiation; no use of force takes place except at internationally accepted constabulary levels; and threats of force are confined to the normal processes of deterrence.

So to keep this equilibrium, what does a medium power require of its forces in the maritime sphere. To take the deterrent point first, forces must clearly be capable and ready: and that includes readiness to move to a higher level of conflict if it need be. There are several components to that readiness: material state, state of training, a sufficient intelligence and communications base. All these can, and must, be built up and maintained in normal conditions if deterrence is to be effective.

There are other things to be done. The support of municipal law by exercising the necessary enforcement at sea is a charge on maritime forces. The need is for adequate surveillance and the capacity to inform, warn, board, inspect and, if necessary, detain. The potential area to be covered has, as well known, been much increased by the 1982 Law of the Sea Convention. Economic Zones out to 200 miles from the coast, archipelagic waters regimes for certain states, different and better-defined regimes for passage of international straits and the territorial sea, have all sharpened the constabulary task.

Finally, there's the more elusive concept of naval presence. Journalists tend to call it showing the flag, academics — naval diplomacy; naval officers opt for the more generalised term *Presence* because they've been there — and Being There is what it so often is. I do not think there is a better example of what I mean than the Soviet naval presence in the Indian Ocean in the late 1960s and 1970s. The squadron was not of great strength either numerically or in force of arms; it spent a lot of its time at anchor and paid relatively few port visits; but it was there, it laid the base for a much more forward policy in parts of Africa; was a significant component in the relationship with India; and I dare say never out of American thoughts for long. It was a classic presence operation. But when I say that, I don't mean that such operations are a prerogative of superpower. A medium power has few better ways of showing where it considers it vital interests to lie.

Let's move on now to the second level of conflict: *Low Intensity Operations*. These I define as operations which never merit the title of war, are limited in aim, scope and area, and are subject to the international law of self-defence. In practice they may include sporadic acts of violence on both sides.

The aims of low intensity operations are likely to be expressed in political, or even economic, rather than military terms. The Royal Navy's Armilla Patrol in the Gulf and its approaches has the aim of ensuring the lawful freedom of passage of ships under British jurisdiction; I've invented that, I have not read the Op Order, but if it is not phrased like that we'd all be surprised.

And the limitation in scope is governed by the *two great principles of self-defence — necessity and proportionality*. These are based in a great case of 1839 when the Canadians, tired of terrorism by marauding bands from the USA, crossed the Erie River and cut out an American supply vessel called the Caroline, with some loss of life. She was set on fire and drifted over Niagara Falls — a brave sight. The American Secretary of State, Webster, protested to Britan through Ambassador Fox, requiring Britain to show a need 'overwhelming, immediate, leaving no choice of means and no moment for deliberation', and that the raiders 'did nothing unreasonable or excessive; since the act, justified by the necessity of self-defence, must be limited by that necessity and kept clearly within it'. As a matter of interest, in a subsequent exchange of letters it was accepted that these requirements had been met in the Caroline case.

These principles are reflected in the Rules of Engagement which govern forces taking part in low intensity operations. These will often, in the eyes of the military, amount to orders to fight with your hands tied behind your back: don't fire until he has fired at you or, as the Foreign Office phraseology will have it, has 'committed a hostile act'. They may be relaxed once a pattern of violence emerges: then, maybe, you are allowed to take action once hostile intent has been demonstrated. But how demonstrated? That's a matter for interpretation by the commander on

the spot. At least maritime forces come in discrete packages and can't merge into the landscape as they can on land.

Because Rules of Engagement are a politico-military necessity, it is necessary to honour international law. It is also necessary to persuade the world that one is not the aggressor, and not firing the first shot gives a powerful premium. It is, finally, necessary to keep the conflict at manageable proportions so that a solution by negotiation remains a possibility.

This leads me to the third kind of limitation in low intensity conflict, that of area. I'm not greatly enamoured of Exclusion Zones on the Falklands pattern. The idea of a sort of Jousting Area appeals to some tidy-minded military men but conflict is not a tidy business and outflanking is all too possible a risk. I tend to think that in low intensity operations the limits of the area are likely to be defined de facto by limitation of the aim, and in such operations it is reasonable to expect the aim to be well understood by both sides.

There have been plenty of low intensity operations at sea in the past three decades: major case studies in a thesis I did a decade and a half ago included the Anglo-Icelandic so called Cod Wars, the Indonesian Confrontation, the dispute over the Gibraltar Waters, the Beira Patrol; and you could have added several others even then. Since that time there have been the Armilla Patrol, several forays in support of Belize, and a lot of anti-gunrunning and anti-illegal-immigration work spread from Hong Kong to the Irish Sea. That was just the Brits.

You can categorise low intensity operations on this evidence into *sea use* — which includes demonstrations of right or resolve, amphibious landings by invitation, the evacuation of nationals, and ensuring the passage of shipping against sporadic violence — and *sea denial*, which includes counter-gunrunning, counter-piracy, counter-infiltration by sea, the protection of offshore installations.

What qualities do you need in the forces carrying out such operations. You must be able to get and process information — from longterm intelligence to warning of imminent attack. Your forces must command a wide spectrum of violence, from the finely discriminating to the lethal. It will be as well if they are visible and non-sinister — for you are on the side of the angels — aren't you. They must have very good communications, between each other and back to headquarters. Finally, those up front must be backed by sufficient strength — the age-old military principle of cover — in case reinforcement or escalation is required.

Which leads us on, inevitably, to the third level of conflict, which is *higher level operations*. These I define as active, organised hostilities involving, on both sides, fleet units, and/or aircraft and the use of major weapons.

That does not mean they are unrestricted. There are still limits to aim, scope and area. But they are all likely to be different from the limits of low intensity operations, and this actually makes a transition from low intensity to higher level a quite difficult thing to manage.

Let me explain in terms of the aim. The aim of a higher level operation is likely to be expressed in military terms. So in 1971 the Indian directive might have been: 'Blockade East Pakistan: attack and sink Pakistani ships in Karachi Harbour'. In 1974, the Turkish aim: 'Occupy the Northern half of Cyprus'. In 1982, the British: 'Retake the Falkland Islands'. Crisp, military aims. That doesn't mean there will be no rules of engagement. They will particularly be concerned to limit escalation into more dangerous and destabilising modes of conflict. Nor does it mean there will be no limitation of area; though, here again, I must express my distrust of too mechanistic an approach. It is more than arguable that the Falklands Exclusion Zone was responsible for the political rumpus over the sinking of the *General Belgrano*. Had the zone not been declared, the sinking would have been seen for what it was, a justifiable military action in the face of overwhelmingly demonstrated hostile intent and, indeed, hostile acts by Argentine forces the day before.

What then are the *principal types of higher level operation*. They fall again into *sea use and sea denial:* sea use includes the passage of shipping against opposition, amphibious landing, the bombardment of the shore; sea denial can include the denial of whole geographical areas — including blockade — or denial of the area round a moving datum. In some cases the use and the denial objectives of an operation may merge — and then indeed you may get a battle. Battle is not an inevitable outcome of higher level operations: but if a medium power plans never to have a battle, it may get one on very unfavourable terms.

So, inevitably, one needs to look at the requirements in that light. In higher level operations, lethality is at a premium. But so is information gathering and processing; and so are communications. Finally, the ability of the command to dispose and govern its forces to the best advantage is a force multiplier of first order.

On the fourth level of conflict, *general war*, I do not have much to say. Whether heresy can consist of not having much to say, I don't know; if so, I am a heretic. I don't think a medium power

has much to say about general war because it is certain to be dominated by the superpowers; and the contribution a medium power can make will be simply an extension of its higher level capability.

With one exception. A few medium powers now, and surely more in the future, can deploy nuclear weapons at sea. A decision to develop strategic nuclear weapons is a momentous one for a medium power; it does represent a very considerable outlay of defence money which could be spent in other ways, and almost certainly the diversion of some general purpose forces to the protection of the most strategic nuclear weapon platforms. On other hand, it can be regarded as a supreme national deterrent safeguard, the epitome of self-reliance.

Tactical nuclear weapons — and tactical is not a misnomer at sea — have a different rationale. It is one which I am bound to say I have never heard well articulated in the West, and I am not sure how valid it is. It goes something like this: We are not sure how effective our weapon systems will be in war; they may not be good enough to impose sufficient attrition if we use conventional munitions; we must have something of the greatest possible lethality to use if we get desperate; anyhow the other fellow has got it, so our possession of these things adds to our deterrent structure.

Now whether that justifies the medium power in possession of tactical nuclears for use at sea is, to me, not at all certain.

I turn now to the other governing concept of maritime strategy for medium powers, that of *reach.* Reach we can define as the distance from home bases at which operations can be carried out. Immediately the cry goes forth: 'what sort of operations.' and it is, indeed, a good question. For example, presence operations in normal conditions are undertaken by quite small navies at great distances from their shores: Latin American sail training ships are an example. On the other hand, vital interests indeed are needed to dictate a requirement to mount amphibious operations half way across the world.

When you combine the question 'how far.' with the question 'how much.' you are getting quite close to the heart of a medium power's maritime strategic problems. At long reach, all the practical and resource constraints felt by a medium power are tightened. Can one afford what is needed not only to mount but to sustain operations of a certain level at such a reach. Can one afford not to. What are the limits to be set, and the risks one is prepared to take. The two are interactive.

Before coming to some conclusion how these dilemmas are to be managed, let me say a few words about *material.* A rather embarrassing consequence of the levels-of-conflict approach to naval forces is that the different kinds of unit turn out to be of very varied utility at different levels.

The surface ship. Visible, capable of sustained operation, good communications and data handling, non-sinister, a wide variety of sensor and weapon systems. Therefore, a flexible and essential instrument for normal conditions and low intensity operations. At the higher level and beyond all too easily detectable, all too vulnerable to both missile and underwater attack; but still a considerable purveyor of threat to the enemy and an instrument of sea-based command.

The submarine. Again, capable of sustained operation, though it must return to a secure base at the end of its patrol. Its greatest virtue is concealment. Its under water sensors are good, often the best, but its communications with anything in the atmosphere are bad and it doesn't want to use them anyway. Its weapons are lethal and its image sinister. Consequently its utility in normal conditions and at low intensity is confined to covert surveillance and cover — a stick to shake — but at the higher level it comes into its own.

The combat aircraft. It has fantastic tactical mobility but limited endurance in the air. It has good communications but things happen fast in the air and missions are often preset. It can mount many different weapons, all of high lethality, and the accuracy and discrimination of those weapons has not historically turned out to be exactly surgical. Again, therefore, it is by no means an ideal instrument for low intensity operations.

Surveillance aircraft, both fixed and rotary wing. These really are all-level vehicles, essentially alike in normal conditions — particularly in the constabulary tasks, surveillance, search and rescue, communication flights; at low intensity for extension of the warning envelope, for monitoring against submarine activity by the other side: and at the higher level for the whole gamut of the anti-submarine process from detection to prosecution of contacts, for early warning of air and surface attack, for linking communications.

So how does the medium power put all this together into a maritime organisation that can safeguard its vital interests at and by sea.

The first thing to do, clearly, is to *define* those *vital interests* and to *assess* how they may change during the period for which one is planning — and that of course ought to be about thirty years, but you won't find many crystal

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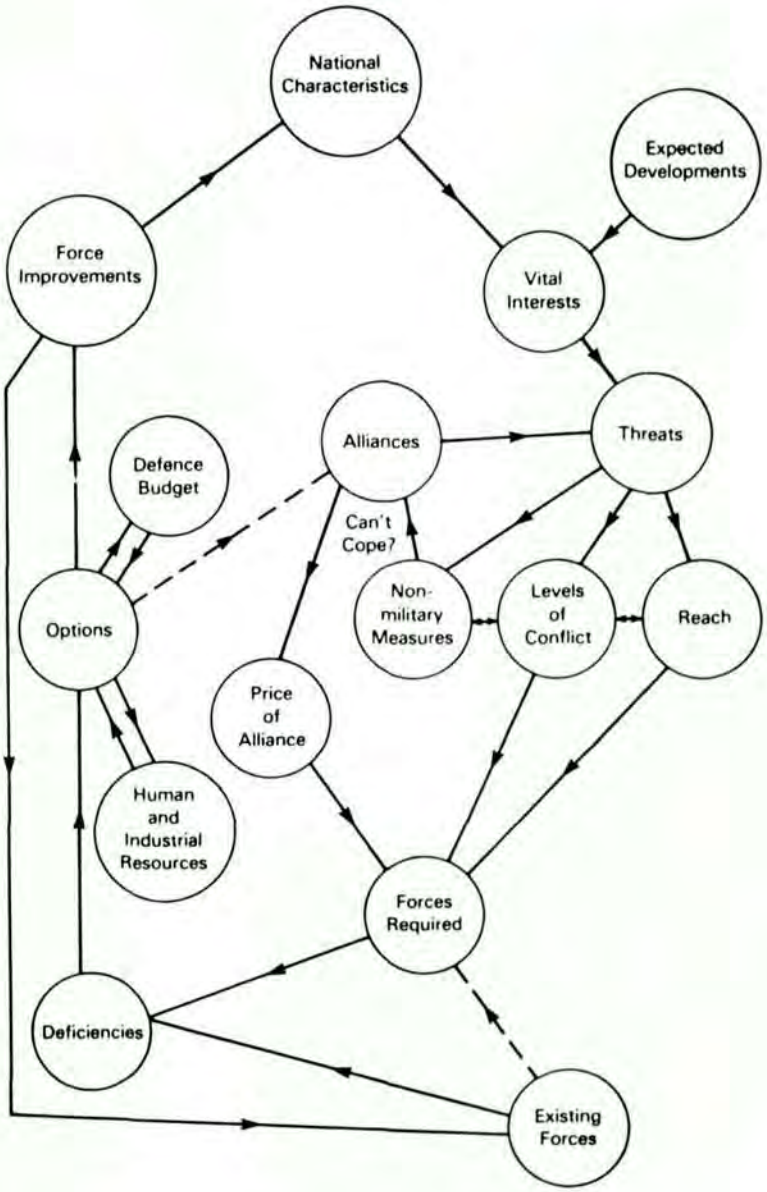

ballgazers prepared to go that far. Then you must look at the *threats to those vital interests* — and the *predicted changes* in that field. Then comes a most critical part of the analysis: the part non-military measures might play in safeguarding against the threat (countries, after all, have bought a large part of their security before now, and at least one medium power still aims to do that), and the part to be played by maritime forces analysed in terms of level of conflict and reach. *The overall aim, of course, is to construct an organisation that will deter any military initiative by an opponent.*

Can you do that on your own? Almost certainly not, because somewhere lurking there will be a threat larger than a medium power can cope with certainly at the higher level, and at long reach. If you cannot cope, you need an ally; and you must be prepared to pay the price for alliance. It can be paid in money; but you might prefer to spend that on your own forces. Most medium powers will prefer to pay in a combination of three other ways: strategic position and facilities related to that; diplomatic support; and contributory forces. You know a good deal about the first two in Australia, as indeed we do in Britain, and I shan't labour them. But the third is singularly relevant to my theme.

You see, if a *medium power emphasises its alliance commitment* to the extent of saying that its forces are 'a contribution' and that only, *it is very likely to get a force structure that is not suited to its national needs.* It is almost bound to be optimised to a level of conflict higher than a medium power would want; it will be looking at threats that the medium power would not regard as the most immediate; and it might be dangerously dependent on certain elements of the ally's naval forces. AEW comes irresistibly to mind: it was because the Royal Navy was regarded essentially as a 'contributory' naval force for NATO that it had no Airborne Early Warning in the Falklands.

What, after all, is a medium power trying to do with its alliance? There is nothing altruistic about this. It wants its ally on its side when its vital interests are threatened and it can't cope on its own. Historically, there has been no rush by allies to join in such circumstances. They have to be convinced that the medium power means business — so it must be able to fight on its own at least long enough for the ally to stir. The process by which allies enter war is best thought of as a sort of catalysis — not just the operation of a few procedural levers.

So, in my view, the price of alliance in terms of force structures has to be carefully contained, and the other means of paying must be exploited as much as possible. And then, by a careful balancing of resources, technology, manpower, nd a proper judgement of the limits of the possible and the risks that are permissible, the medium power can plan and produce nationally-based maritime forces that will help it decide its own destiny.

Britain and Australia

How have my country, and yours, done? Two interesting case studies, you may think. Britain has for almost exactly 20 years had a defence policy based on 'a contribution to NATO'. Everything had to be justified on that ticket. Yet by one means and another, the Royal Navy not only brought into being a force of nuclear-powered submarines — which of course could be justified on the NATO ticket — but kept efficient operational communications, high-grade anti-submarine assets, air defence that gave an opponent formidable problems, ships and troops capable of amphibious assult, backing them all with the best seagoing logistic organisation outside the USA; and even, in a brilliant staff counter-attack, reprovided fixed-wing aircraft organic to the first fleet for attack and defence. It was a muddled, illogical and peculiarly British rearguard action, but happily it worked just well enough to meet the test of 1982. Two years on, it might not have done, for much was about to crumble. The dykes have remained patched since.

Australia has unique problems. The basic ones are that it is very big, and therefore diffficult to defend. But also, it is very big and therefore difficult to attack. Those nettles, it seems to me, have been grasped — with many others — by the reports of Dibb in 1986 and the Department of Defence in1987; and, again it seems to me, the strategic basis of those reports is entirely sound in terms of medium power. I now must make a total disclaimer of collusion between Dibb and myself. In fact, we published our work, with its remarkable similarity in thought about levels of conflict and reach, at almost exactly the same moment in 1986, and we did not communicate until the IISS Conference in the autumn of that year when we approached each other over the horizon waving our respective volumes like signal flags. Indeed, if I have a criticism of Australian maritime policy it is not on the strategic side but on the implementation of the strategy in material terms. Is that well-judged area of interest covered by force that can be sufficiently brought to bear. Or by warning of enough certainty. No doubt there are many other questions; as I said, your problems are of large dimensions.

But an outsider, looking in on your great country, sees your new policies as based on cool self-appraisal and sound forward thinking. With

those as a basis, and the growth and vigour that is apparent everywhere, the material side must come right, given reasonable deployment of resources. In congratulating you on your bicentennial, then, I also have to congratulate you on a notable strategic coming of age.

THE GALLIPOLI CAMPAIGN — NAVAL ASPECTS

By
Commander John Scott MBE ADC RAN

Australia's heritage has developed from the myriad of events and experiences that have moulded our society into the priveleged and multi-cultural society that it is today. 25 April 1915 stands out as the day that had the greatest effect by demonstrating the unique character of the Australian fighting man. A character that included all the attributes that have become known as 'Australian'. The landings at Gallipoli on the first Anzac Day became a military disaster resulting in massive loss in life and incredible suffering. However the defeat has been turned into victory through the demonstration of courage, perseverence, initiative and mateship that are recognised as major attributes of the Australian character. These attributes have been the foundation of many victories since the dark days of 1915, not only on the battlefield, but also in the struggle to conquer a vast and inhospitable continent, far from the roots of those who have settled here during the past 200 years.

Gallipoli was a disaster because of poor planning and indecision. Had the original plan been persevered with, there may have been a very different outcome and we would not have had Anzac Cove as a stark example from which to learn our lessons.

The Gallipoli campaign would not have been attempted had Turkey not entered the war. There was no good reason for her to do so as no-one threatened her seriously and it was to the advantage of both the allies and the central powers to keep her neutral. However a chaotic political situation had led Turkey to bankruptcy and the hopeless situation compelled her to look to others for assistance — the choice lay between Britain and Germany. Britain had no desire to take the Turks as allies, but Germany initially had other ideas owing to the strategic location of the country in relation to the Russian threat.

Until August 1914, both a British naval mission and a much larger German military mission were still operating in Constantinople. This created complicated intrigues. On 3 August 1914 Winston Churchill, then First Lord of the Admiralty, announced that two warships Britain was building for the Turkish Navy had been requisitioned in the interests of British national security. Germany immediately responded by offering the battle cruiser GOEBEN and the light cruiser BRESLAU which just happened to be in the Mediterranean at the time. The GOEBEN had a displacement of 22,640 tons, ten 11 inch guns and a speed of 26 knots. She could dominate the Russian Black Sea Fleet whose presence was worrying the Turks at the time. She could outrun, although not outgun, any British naval ship in the Mediterranean.

This put the British in a most difficult situation in Constantinople. The Royal Navy was ordered to shadow the two Germans but not to open fire until war with Germany was declared. This happened at midnight on 4 August 1914, but the German ships had eluded the British and on 9 August they steamed through the Dardanelles and were delivered to the Turkish Navy.

The situation in Constantinople was now almost as difficult for the Germans as it was for the British. Turkey was still neutral but it was unlikely she would become aligned with the British. The German High Command had decided however that they did not need Turkey as an ally for the time being. Meanwhile Turkey still had her internal problems.

Soon after, Germany realised that the war was not going to be won as quickly and easily as she had expected, and she began to look for allies. Turkey was an obvious choice and in September 1914 the British Mission was forced to leave Constantinople. The Dardanelles were closed by a minefield and on 29 October the GOEBEN, the BRESLAU and a Turkish squadron partly manned by German sailors, steamed through the Black Sea and opened fire on the Russians at Odessa, Sevastapol and Novorossik, sinking all shipping they could reach and setting the oil tanks on fire.

The following day the Russian, French and British ambassadors at Constantinople delivered a 12 hour ultimatum to the Turkish government. This was not answered and hostilities with Turkey officially began the following day.

Whitehall took little notice of this development until 3 January 1915 when Lord Kitchener, the Secretary of State for War, received an appeal from the Russians to start a movement against the Turks to compel them to relax pressure on the Russian army in the Caucasus. Action in Salonika was ruled out because the Greeks

refused to assist. Kitchener decided that the only plan likely to meet with success was to sweep the mines from the Dardanelles and capture Constantinople with a naval task force. This decision was made despite the fact that, nine years earlier, the General staff had avised that it would not be possible to force the Dardanelles with warships alone. However, Kitchener was adamant that no troops could be spared from the western front.

That famous British Admiral, Lord Fisher, who had been brought out of retirement to become First Sea Lord, agreed with Kitchener but added the reservation that the action must be immediate if it was to be successful. The subsequent campaign was anything but immediate.

Fisher recommended an expeditionary force of 75,00 seaoned troops from France supported by old battleships of the CANOPUS and MAJESTIC classes to force the Dardanelles. Both Churchill and Kitchener agreed that whatever action was taken it should be carried out only by ships of the Royal Navy. A number of senior officers submitted alternate plans; one recommended the use of 12 battleships, 3 battle cruisers, 3 light cruisers, 1 flotilla leader, 16 destroyers, 6 submarines, 4 seaplanes, 12 minesweepers and a score of other craft of all kinds. Assistance was to be obtained from a French squadron of 4 battleships and various auxiliaries.

Kitchener changed his approach and became opposed to the scheme unless it could be supported by troops — and there were no soldiers to spare. Fisher tried to resign in protest. Arguments raged at War Office and, as a result, no firm decision was forthcoming.

By the middle of March, Fisher had become the chief advocate for an army at Gallipoli. The 'Dardenelles', he cried, 'futile without soliers', and he remarked very sensibly; 'somebody will have to land at Gallipoli some time or other'.

It was probably Churchill who, somehow, upset the established practices of the Navy and talked the Admiralty into proceeding with a campaign that, on careful exmination, they did not believe would succeed. Meanwhile the Naval campaign had started with bombardments of the other forts on the European and Asiatic shores. The operation went well, with little opposition, and the fleet penetrated 6 miles into the straits before bad weather forced them to withdraw.

A second attack against the shore fortifications was not so successful and between 18 and 22 March 1915 the allied fleet lost IRRESISTABLE, OCEAN and BOUVET. HMS INFLEXIBLE was saved only by the skill of her Commanding Officer.

Meanwhile, Kitchener had decided that the Australian and New Zealand Division in Egypt should be sent to establish a landing with the 29th Division in support; a total of 70,000 men. This was a complete reversal of the earlier decision not to send troops.

Vice Admiral de Roebeck thought it best that he withdraw his fleet until the Army, now scattered along the Mediterranean shores, was ready to land. Admiral of the Fleet, Lord Webster Wemyss, agreed that the straits could not be forced by battleships until the minefield had been cleared and this could not be done until the concealed Turkish gun, which defended them, had been destroyed. The guns could not be neutralised until the peninsula was in allied hands and that could not be accomplished without the Army.

Hindsight has shown that, had the Navy rushed more ships through the Dardanalles, they could have reached Constantinople. Churchill had tried to order the fleet to continue the offensive but it was overriden and the decision to await the Army was approved.

So ended the Navy's participation in the Gallipoli catastophe; the real disaster started at Anzac Cove on 25 April 1915. Whatever may be said about this next stage of the campaign, the landings at Gallipoli were the greatest amphibious operation undertaken up to that time. Nearly everything was a first for modern warfare: the battle of Naval guns against shore batteries; landing large armies in small boats on a hostile shore; the use of radio; naval aircraft and submarines (including an Australian submarine which penetrated the Daranelles and caused considerable havoc amongst enemy shipping until it was sunk and the crew captured); and so forth. The lessons learnt had great influence in World War Two, particularly in the Mediterranean landings, General MacArthur's Pacific campaign and at Normandy. In many ways the lessons of Gallipoli formed the guide book for modern warfare.

The Royal New Zealand Navy's new fleet supply ship HMNZS Endeavour departing the Port of Fremantle in Western Australia on 16 May, 1988. The 12,300 Endeavour made a three day stopover on her delivery voyage from South Korea to New Zealand. Photograph: LSPH W. McBride, Royal Australian Navy.

POLITICAL, ECONOMIC AND STRATEGIC DEVELOPMENTS IN THE INDIAN SUB-CONTINENT AND INDIAN OCEAN

By
CDR D.J. DAVIDSON RNZN

INTRODUCTION

The recent acquisition by India of the ex RN aircraft carrier HERMES and the lease of a Charlie Class SSN from the USSR, has prompted Naval analysts and politicians to comment on the volatility of the Indian Sub-Continent, and more importantly, of the Indian Ocean. In addition, India's motives for her involvement in Sri Lanka, coupled with her increased Armed Forces have forced the West to take notice of this large and diverse country.

The geographical area for discussion is limited to Pakistan, India, Bangladesh and Sri Lanka, as well as the Indian Ocean area contigious to these countries. Whilst other countries on, or bordering the Indian Sub-Continent will not be included in this paper, any relevent activities which impinge upon or affect the study will be included.

This paper attempts to forecast the likely economic, political and strategic developments in the Indian Sub-Continent and the Indian Ocean which would be of significance in the next ten years.

BACKGROUND

The Indian Sub-Continent experienced its first Western exploration in 1498. Explorers found a continent which had a history of at least 4 000 years, which had experienced fierce historic rivalries, and contained a conglomerate of hostile ethnic and religious groups.

The initial interest in the Sub-Continent, which was referred to as India until as recently as 1947, by the Western explorers, was based on trade. The trade aspect of Western involvement remained paramount until after World War II when, during the independence 'boom' which marked the dismantling of the British Empire, the Sub-Continent was partitioned into India and Pakistan. Sri Lanka followed a similar pattern and Bangladesh split from Pakistan in 1971 to complete the four countries which are the subject of this paper.

The Indian Ocean, which had been the sole preserve of Great Britain, 'the lake of the Royal Navy', also changed in status in the 1960s with the withdrawal of United Kingdom defence forces from East of Suez. It is possible that future developments on the Indian Ocean, rather than on the Sub-Continent, will have the greater impact on the world interests, and that these events may not emanate from activities on the Sub-Continent itself. The formula of superpower rivalries, the nuclear question, the supply of oil through the region, primarily to Japan and the ever changing balance of power in the Middle East may prove to be even more influential on this area that any events occurring in the countries of this study. For this reason, the Indian Ocean is also included in this paper.

NATIONAL PERSPECTIVES

INDIA

India is by far the most populous and economically influential state in the region and it is the direction that India moves which will influence any continental developments. Under the administration of Prime Minister Rajiv Ghandi, India is undergoing a period of relative stability. A modernisation programme is currently transforming the economic, political and military institutions. In variance to other countries in Asia, this transformation is experiencing little opposition from the population as a whole, with the exception of the more militant Sikhs.

The Author: Commander Davidson joined the RNZN in 1963 as a Junior Seaman and was promoted to an Officer Cadet in 1966. During the period 1967–73 he enjoyed postings to RNZN fleet units deployed in the far East, the US West Coast and even one season in Antarctica. Following a 'D' course at HMAS WATSON and further training at the RNZN Officer Training School he completed the PWO course with the RN and completed several postings in that role. Since 1979 CDR Davidson has principally been involved with Staff Duties with the distinction of being the first foreign student posted to RANSC in 1982 while also completing JSSC in 1987. Recent postings include Executive Officer, WAIKATO (1982–83), Director of Operations Policy — Naval Staff (1985–86), and his recent posting as SO1 Personnel and Support/Senior Naval Officer for the NZ force South East Asia in Singapore.

Economic Factors

India's economy has experienced a real growth rate recently of *5% per year*, and, even though 50% of her population earn hardly enough money to stay alive, her economic growth is expected to continue. This is due, by and large, to her huge population base of cheap, unskilled labour. Average annual income in 1984 was US$232 per head of population.

Whilst her economy is based on the manufacture and export of industrial products (35% of total exports), food and live animals (31%) and crude materials (13%), she has only recently modernised sufficiently to be competitive on world markets. The Bombay High offshore oilfields production coupled with increased production of oil in the north-east of the country, has made India 70% self-sufficient in petroleum products. The prospect of further offshore oilfield development further from the coastline, will greatly assist economic development. However, this latter development raises interesting theories of ownership due to distance from India, and possible disputes with other littoral states of the Indian Ocean.

India's merchant navy has also played a significant part in her economic improvement and is now the second largest in Asia. The increase in size of the merchant navy has been coupled with a modernisation of the larger ports and at least four new ports are being constructed. Both of these aspects are due to deliberate Government policy.

The India economy is considered to be one of the most stable in Asia (2) having built a firm foundation for further growth. It should be noted that the USSR is by far India's largest trading partner, and this factor could preclude expanded trade relations with the West.

Political Factors

India has long been a member of the Non Aligned Movement (NAM) and last year completed a three year chairmanship of the Movement. She maintains close trading and defence links with the USSR, but since 1982, and especially since Mrs Ghandi's death, India has improved relationships with the USA. It can be said that of all the non-aligned nations, India has the most balanced relationship with both superpowers. This could be disputed by the Western military community. However, it is considered that this opinion is usually due, in part, to the source of most of India's military hardware — the USSR.

India's relations with her neighbours have often been uneasy, especially with Pakistan with whom she has fought three wars since partition. Notwithstanding this, a general attempt to improve relations with her sub-continental neighbours is evident with the establishment in 1985 of the South Asian Association for Regional Cooperation. Its members are India, Pakistan, Bangladesh, Sri Lanka, Bhutan, Nepal and the Maldives. With the exception of the ongoing border disputes with Pakistan and the re-taking of Goa, India has *not shown a tangible tendency for expansionism* since the Gupta era of 300-600 AD. That influence was noted for its peacefulness, and achievements in art, sciences, philosophy and law. This would have been due, by and large, to the influence of the Hindu religion — one of sacrifice and oneness. This influence is still very evident today and greatly affects the direction of Indian politics, both internal and international.

Military Factors

India currently has a military of 1,260,000 personnel in uniform, 846 combat aircraft and 35 major fleet units. *This represents increases since 1969 of 30%, 32% and 50% respectively.* (3). This expansion signals a *fundamental change* to the strategic philosophy of the Indian Government but is not without sound basis. Substantial regional tensions have not subsided, rather they could increase. Iran and Iraq are in the eighth year of a major war and the USSR has been fighting in Afghanistan since 1979. This latter conflict frequently spills into Pakistan and amplifies regional fears of further disturbances and military imbalances on the sub-continent. Against this background, the Indian Government has created its defence forces at least equal to any regional threat it may encounter. The Indian Navy's expansion, however, has been viewed by military analysts to be beyond that required for regional purposes. However, even the projected three aircraft carriers, which in effect provide only two operational ships for 75% of each year, are compatible with regional security. India's two coast-line offshore assets and possible future mineral resources, coupled with the Government's desire to be the strongest regional sea power in 'her' ocean are considered *reasonable* reasons for the increase in naval force structure. The increase in the activities by the superpowers in the Indian Ocean will be addressed later in this paper. Briefly, however, with the withdrawal of British forces in the 1960s, the natural superpower reaction was to fill and counter-fill the vacuum. India was in no position to influence these policies, a deficiency in her strategic policy she intends to rectify.

Summary

India is updating her economic, political and military policies to not only ensure a more

influencial place in world affairs but to also assert a previously theoretical leading role on the sub-continent and in the Indian Ocean.

PAKISTAN

Second to India in its regional dominance of the sub-continent, Pakistan is very different from her neighbour. Ruled by a dictatorship which appears to be regressing in development, primarily due to the rise in fundamentalist Islam, Pakistan has the added problems of potentially hostile (and larger) neighbours on two of her borders.

Economic Factors

The decline in Pakistan's economy of the 1970s, particularly in the agricultural sector, was reversed by the early 1980s. This was due in part to the Government's National Agricultural Policy, which reduced wasteful subsidies and offered incentives to private investment. However, the general economy is still considered stagnant, in part due to an exodus of professional and skilled workers to work in overseas countries. The stagnation is also due in part to the Islamisation of the nation which has had detrimental effects on the economy, partly due to the teachings of Islam which ban the payment of interest on loans. This has affected the willingness of the private sector to invest in the economy. The general economical state of the nation is unlikely to change in the short term. It can be said that Pakistan has not yet fully recovered from the effects of partition which shattered her economic structure, leaving her with no civil administration or economic expertise.

Political Factors

After a turbulent political history since 1947, General Zia *assumed* the powers of Head of State and since then all political policy has emanated *solely from his office*. His administration has been noted for its repressive autocratic and centralised style. The foreign policy of Pakistan has been conditioned very largely by Indo-Pakistan relations, which have also largely influenced Pakistan's relations with other nations. Her relations with the US deteriorated under President Bhutto, mainly in retaliation to a US ban on arms sales and US opposition to France selling nuclear technology to Pakistan. These relations improved immediately after the invasion of Afghanistan and have improved ever since. Further causes of this rapport with the US are that India does not believe that there is a threat to Pakistan on her border with Afghanistan, plus the ongoing border dispute with India over the Kashmir region. As long as the Soviet occupation of Afghanistan continues, there is no reason to suspect that this status of relationships should alter.

With regard to relations with the West, Pakistan has a geo-political significance both in South Asia and as an Indian Ocean littoral state. It has strategic importance, due not only to its proximity to Iran, Afghanistan, the USSR, China and India, but also by virtue of its location at the mouth of the Gulf and hence to the sea lanes that export oil from the Gulf.

To reinforce current relations, Western nations are aid donors in the areas of industrial and agricultural expertise, training awards under the Colombo Plan, and programmes for the maintenance of Afghan refugees in Pakistan. The English language, the British colonial legacy, and links in sport facilitate, to some extent, exchanges between Western countries. However, the repressive fundamentalism of the military dictatorship tends to preclude the fostering of closer ties.

Military Factors

In the last six years Pakistan's military forces have increased in manpower by 50% to 430 000. The number of combat aircraft has also increased to 375, whilst the Navy has doubled in size to 19 major fleet units. Since the invasion of Afghanistan, the US has markedly increased it's military aid to Pakistan. However, even with this increase in aid and the acquisition of state-of-the-art military hardware, Pakistan's military forces will be fully occupied with containing the Afghan and Soviet incursions on its North West frontier and matching any Indian military build-up on the Kashmir border. Any expansion into the Indian Ocean is not a credible policy for the forseeable future, even if Pakistan had the requirement to do so. Her friendly relationship with the US ensures that any maritime assistance could be rendered by the units of the Seventh Fleet, always present in the North West India Ocean.

Summary

President Zia rules a country which is economically stagnant, politically tied to the US and China and militarily concerned with border problems on two fronts. The Islamisation of the nation, especially some proposed backward economic measures, are likely to remain an essential, even explosive issue which will tend to compound Pakistan's not inconsiderable problems. It has been espoused that Pakistan will host the next likely anti-West revolution (4). The combination, in that case, of two like-minded Islamic countries, Iran and Pakistan, does not

augur well for stable relationships on the sub-continent and the North West Indian Ocean.

BANGLADESH

Whilst Bangladesh is addressed as part of the Indian Sub-Continent, its effects on the region and the Indian Ocean are minuscule compared with India and Pakistan. Having achieved independence from Pakistan in December 1971, it is still in the formative years of its economic, political and military policies. It is intended to address these factors as one.

Economic, Political and Military Factors

Since independence Bangladesh has been beset with problems of immense poverty, under-employment, and unemployment in the rural areas. These factors are compounded by frequent devastating floods, famines, and lack of population control. Coups, mutinies, the assasssination of two leaders in ten years and a corrupt military community ensure that, for at least the next ten years, Bangladesh will continue to be one of the poorest countries in the world and will have little impact on developments in the region outside her border.

Bangladesh has excellent relations with the US, China, Japan, Western Europe and Australia, all of whom supply much economic aid. Relations with the USSR are cordial and improving. They are cooling with India, with whom differences have arisen over the sharing of the Ganges waters and delineation of sea boundaries. Her military forces are small, possess mainly second-hand equipment and are of dubious efficiency.

Summary

Bangladesh needs time, economic aid and strong leadership if she is to improve her economy and social infrastructure. Until this is achieved, her significance to the West and to developments in the Indian Ocean is negligible.

SRI LANKA

Since independence in 1948 Sri Lanka endured the birth pangs of most newly independent nations in the areas of political stability and economic direction. A poor country, Sri Lanka currently receives more United Nations sponsored aid per capita than any other nation in the world (5). However, due to an increase in private foreign investment, the recent increase in tea prices on the world market and a consistent Government policy of economic development, the country's economic outlook has brightened. Apart from the Tamil minority calls for a separate state, the new, fair constitution and a negligible Communist presence make this country a relatively stable Indian Ocean neighbour.

Sri Lanka's flirtation with socialism, started under the Bandaranaikas has ended and with it, India has given assurances that aid will not be given to the Tamil independence movement. The presence of Indian *peacekeeping* troops reinforces this policy. Sri Lanka's prospects, whilst never bright, appear to be improving in most national areas. The high level of military expenditure is caused by the requirement to control the ethnic disturbances. However, as this represented US$200M in 1985, none of her neighbours can have cause for concern about any military expansionist policies. High aid commitments by Western donors will ensure, for the time being, that Sri Lanka remains in the Western sphere of influence, notwithstanding the country's involvement in the Non Aligned Movement. If control of the facilities that could be reconstructed at Trincomalee was to fall under non-Western influence, then the West, and South East Asia in particular, would have cause for concern. A naval base there would control the maritime approaches north of Australia, including the Malacca Straits.

Summary

For the foreseeable future, Sri Lanka will be involved totally with internal economic problems, ensuring that political stability remains and that the Tamil military situation is controlled. Her involvement in the world forum will be minimal. Her influence on events on the sub-continent will be negligible, unless India changes her posture regarding the Tamil disturbances and takes non-peacekeeping corrective military action, as she did in East Pakistan/Bangladesh in 1971. Then the strategic scenario will warrant serious study, particularly if Trincomalee should be developed for military use.

SUPERPOWER INFLUENCE

Until the British withdrawal from East of Suez, the region attracted little interest from the superpowers. However, starting with building of the US facility at Diego Garcia in the late 1960s, and the subsequent small but regular Soviet naval presence in the Indian Ocean, superpower involvement culminated in the Soviet invasion of Afghanistan and the US *Carter Doctrine*, the latter which defined the Gulf and North Indian Ocean as *an area vital to American interests*. During this transformation of Soviet and American strategic and later, overall political plans, many treaties, promises of military and

economic aid, coalition and agreements have been evident on both sides.

The USSR gained advantageous positions in nations in the North-West Indian Ocean and the Horn of Africa, while pro-Western elements, and China for that matter, consolidated their position in the eastern region. Whilst the USSR gained a foothold in India in the 1960s and is now the largest supplier of military equipment to that country, as well as being India's largest trading partner, India's commitment to the Non Aligned Movement must not be forgotten.

The US has recently concluded a Memorandum of Understanding with India regarding the transfer of technology. This specific area, which is desperately needed by India for her economic modernisation programme, is where the US excels and tends to balance out some of the Soviet influence. One other, little noted, improvement in US relations is the recent assignment of *delegates* to one another's military establishments. Also, 1985 saw the first visit for many years of US ships to Indian ports.

Superpower relationships with Pakistan are dominated by the Afghan War. Russia accuses Pakistan of meddling, whilst the US signed an agreement in 1981 for the transfer of US$3000M in economic and military aid to Pakistan over a five year period. Barring a flow-over of the war into Pakistan, the current status quo will remain unchanged.

Superpower influence in Bangladesh and Sri Lanka is minimal and is restricted to US economic aid to both countries.

Generally the superpowers have collaborated informally, but effectively, on policies regarding the region. These are exemplified by their political *containment* of China during the Indian disputes with China in the period 1963-1970 and nuclear non-proliferation in the region. India is seen as having a supervisory role and of being a stabilishing influence in the region. Any superpower inter-action will be over Afghanistan or by involvment in an internal conflict in the greater Gulf area. This superpower condoned control augurs well for the stability of future developments which may affect Australia.

SIGNIFICANCE OF THE INDIAN OCEAN TO WORLD TRADE

The significance of the Indian Ocean to world trade hinges on the shipment of oil from the Gulf. The US still imports a significant percentage of its oil requirements through the Indian Ocean. Europe, however, is particularly dependent on Middle East oil which is borne out by the continual presence of French and British naval units in that area. The USSR's maritime interest is construed, in part, as a counter to the Western Alliance presence coupled with its ongoing support for countries under it influence.

It is Japan which would suffer the most if Middle East oil was cut off. US or West European influence in the region which would ensure the continued supply of oil to Japan through the Indian Ocean would benefit the Western Alliance. Therefore, increased economic, diplomatic and military cooperation with the sub-continent, especially India, would assist in maintaining the stability of the region and indirectly that of Japan and South East Asia.

Summary

Disruption to trade routes in the Indian Ocean would have little impact on the US and USSR, but a severe impact on Japan and Europe due to their dependence on Gulf Oil.

INDIAN OCEAN AS A ZONE OF PEACE OR OF NUCLEAR PROLIFERATION

The proposal of Sri Lanka in 1971 that the Indian Ocean be internationally recognised as a Zone of Peace, Freedom and Neutrality has remained just that — a proposal. Conceived as a means for removing superpower influences from the region, it, however, requires superpower concurrence if it is to be effective. Introduced annually as an agenda item into the UN Assembly, the proposal lost its impetus in the late 1970s when the US and USSR conducted bi-lateral discussions on the concept. However, the collapse of the Shah of Iran's regime, the construction of the facility at Diego Garcia and the invasion of Afghanistan brought these discussions to an end. Furthermore, the UN proposal contains a clause binding signatories to ban the development and production of nuclear weapons. As this is not in the interests of India or Pakistan, it is unlikely that they will ratify such a proposal. This fact, coupled with the superpowers actions in the Indian Ocean, dooms the proposal to stagnation.

The three India/Pakistan wars spawned an incipient nuclear arms race between Pakistan and India: Pakistan, for the same reasons lesser powers feel that a nuclear weapon gives them greater security; India, as a status symbol as the *leader* of the sub-continent and as a deterrent to any further Chinese adventures on her northern border. As mentioned earlier, the superpowers have not assisted either country in the development of their nuclear technology. This fact, coupled with an agreement by Zia and Ghandi in 1985 not to use nuclear weapons against one another, *has restrained any nuclear*

proliferation in the area. Whether Pakistan will continue development of the 'Islamic bomb' or whether she will develop the weapon for *possible deterrence use against an expansion into her North West territory from the Afghan war is debatable*. The former rationale is feasible given the fanatical nature of fundamentalist Islam. The latter reason is unlikely due to the massive retaliatory strike that could be launched against Pakistan by the USSR.

FUTURE DEVELOPMENTS WHICH MAY AFFECT STABILITY IN THE REGION

India, under Ghandi, will remain stable as long as he has control of the India Congress and the modernisation policies proceed as smoothly as they have to date. A possible problem area could arise in relation to the Tamil rebellion in Sri Lanka. The current *peacekeeping* agreement between the two countries will remain effective as long as India perceives that the Tamil minority is not being persecuted. The possibility of increased Indian military presence in Sri Lanka cannot be discounted.

An increase in Indian iron ore and coal exports to Japan is forecast, which will assist in the areas of GDP growth and unemployment. These factors coupled with India's traditional and current lack of expansionist policies should see India as the continuing stabilising factor in the region.

Pakistan's developments are more complicated. Expansion of Islamic fundamentalism, the Afghan War, boundary disputes with India, the stagnant and repressive government factors could change the entire direction that Pakistan could take — politically, economically and militarily. However Pakistan is contained geographically by the USSR, India and China and indirectly by the US because of aid. The influences of these countries should ensure that any internal upheaval would remain within Pakistan's borders and not influence the region for the foreseeable future. However, of the countries under study, Pakistan is the most volatile and has all the historical trademarks of Iran prior to the downfall of the Shah.

Bangladesh and Sri Lanka are beset with internal problems and have neither the resources nor the will to involve themselves in any activity which could affect the region. Their internal problems are such that, with the exception of the Tamil rebellion, and a possible Indian intervention, no other country will be affected by their national policies.

CONCLUSION

The Indian sub-continent possesses four nations of varying economic, political and military influences and capabilities. These range from Indian modernisation and stability with a modest economic growth through Pakistan's repressive, stagnant, Islamic society to Bangladesh's and Sri Lanka's poor economies, large populations and internal difficulties. On the whole, the region's influence on the West's interest will remain relatively low, when compared to other countries of the world. The impact of developments in the Indian Ocean will be of more relevance, particularly with regard to passage of trade through that area. These will depend more on the influences of superpower inter-action in the region than on events on the sub-continent.

A forecast of future developments is:

a. Prospects for increased trading between the West and India as the modernised Indian industry increases its requirements for more raw materials.
b. Closer cooperation in the technological sphere as Indian industry modernises.
c. The potential for the fostering of closer dipomatic ties by India as a result of the diplomatic thaw with the US.
d. Increased Indian maritime military capability and power projection into the Indian Ocean as India increase its influence for regional purposes in that area.
e. Minimal impact by land and air force developments due to ongoing pre-occupation with internal and regional problems.
f. A maintenance of the superpower *status quo* in the region due to Russian pre-occupation in Afghanistan and American satisfaction with the Indian *supervisory* role in maintaining regional stability.
g. A continuing high level of US activity in the Indian Ocean with the consequent continued freedom of passage of trade.
h. The Indian Ocean will continue to be of strategic importance to the passage of trade, especially for oil from the Gulf.
i. The proposed Zone of Peace will not come to fruition as long as the superpowers maintain the high level of military forces in the region, **and India and Pakistan have a potenial nuclear capability.**
j. Nuclear proliferation will be impeded by the US, USSR, India and Pakistan by treaty (US/USSR) and by agreement (India/Pakistan) as it maintains the currently acceptable *status quo*.

k. The possibility that Pakistan's instability could foster another Iranian type revolution which could de-stabilise the region and prove difficult for India to contain.

l. Further intervention by India in the Tamil problem in Sri Lanka, which could lead to the military use of the strategically important port at Trincomalee.

Acknowledgements

1. During the 'Seapower 84 Seminar', VADM M.P. Awati said '. . . and the RAN would be welcome in the Indian Ocean provided it did so on a self-sufficiency basis . . . not dependant on USN for supply and support'.
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BOOK REVIEWS

CASPAR JOHN

By Rebecca John

Reviewed by: A.W. Grazebrook

Caspar John was the first Fleet Air Arm officer to become First Sea Lord of the Royal Navy. Before he died in 1984, he started work on an autobiography which was eventually completed as a biography by his daughter Rebecca.

It is reasonable to ask why a biography of such a man, who visited Australia only once in his life, and whose work had little manifest influence on Australian affairs, should be relevant to readers of the Australian professional naval journal.

There are two main answers to that question. Firstly, naval history for almost any navy, or defence force, offers lessons to the other navies of the world. Secondly, Admiral of the Fleet Sir Caspar John was First Sea Lord at a time of economic difficulty, with consequent pressure on defence budgetting. At the same time, Russia's maritime strategy was changing to one of power projection by the use of seapower — a fact unrecognised at the time by Britain's intelligence community. Today, the RAN finds itself in a very similar situation, albeit at a regional rather than super-power level.

Admiral John was successively Vice Chief of Naval Staff and First Sea Lord (CNS) over a total of six years. That period included the succesful obtaining of government approval to build the first of a new generation of British attack carriers. This was no mean achievement on the part of Sir Caspar. How did he do it? Was he able to out Sir Humphrey the Abblebys? Or was it logic, the right and fair way to do it, that triumphed?

Rebecca John's book answers some of these questions, although in somewhat less detail than the more serious historian would like. She details, rather more so than in most biographies, her father's early life in the household of his polygamous, famous portrait painter, father. From this, it is apparent how such a childhood environment spawned the strong and silent admiral. In spite of the radical differences between the two men the Admiral was much attached to his father and the book includes some delightful anecdotes. Most of the photographs relate to the Admiral's early and family life.

The author describes how her father came to fly for the Royal Navy — there is a story of the future Admiral standing before the Captain of Whale Island Gunnery School whilst the Captain tore up Caspar's application for flying training. In spite of this treatment, Sir Caspar was not a rebel — he was a very determined, very intelligent man to whom flying appealed greatly. He came to love flying and, apart from his duties with the Fleet Air Arm, owned and flew his own light aircraft. Once he began flying training, he served in only two postings outside the Fleet Air Arm until he became VCNS nearly thirty years later.

Rebecca John describes well her father's flying training, his personal flying of his own aircraft, and his service with the Fleet Air Arm. The latter was a mixture of service afloat (both in carriers and in cruisers equipped with seaplanes) and in naval aviation appointments at the Admiralty. The outbreak of World War II found John as the Executive Officer of a cruiser. It was in this ship that he saw his only action. His later wartime commands — two aircraft carriers — involved no action although, after World War II, he was present in HMS OCEAN when British destroyers were mined by the Albanians.

Caspar spent the other part of World War II in London, struggling for effective naval aircraft for the Fleet Air Arm, and as British Naval Air attache in Washington. That included contact with Admiral John H. Towers, the unflinching proponent of US carrier airpower. There is a tantalising

mention of Tower's support for the RN instead of the RAF in the allocation of new aircraft. I say tantalising because this biography would have contributed much more to history if the book included much more detail — the personalities, the way they operated, the arguments they used, and so on.

Unhappily, much the same must be said of the book's coverage of Admiral John's period as VCNS and First Sea Lord. There is enough detail to whet the appetitite, but not enough to tell us why Sir Caspar was so succesful in Whitehall. Of course, he was working in an environment very different from the Australian Department of Defence in the 1980s — the British public service did not then dominate strategic and equipment decision making. The key decision making area — where budgets were won and lost — was the Chiefs of Staff Committee, then chaired by Lord Mountbatten.

From the book it is clear that Admiral John knew his Fleet Air Arm thoroughly indeed — from operational flying, through the naval air stations, through the problems of aircraft procurement and design, through the strategic and staff sides, to ways in which training, aircraft procurement and maintenance could be combined with that of the RAF to improve cost and operational effectiveness. Sadly, with the latter he acheived little — his RAF colleague on the Chiefs of Staff Committee proved to be an Officer with the intelligence to perceive the advantages of Admiral John's proposals but without the strength to implement the proposals in the RAF.

The lack of detail on some of the most important historical aspects, from which readers would have most to learn, should not discourage potential readers. The book is well written, very readable, and entertaining. It achieves much as a biography — much more difficult to write about an officer who was succesful as an administrator, as a peacetime commander, but who lacked the opportunity to demonstrate his qualities as a naval officer in battle. Above all, the book fills a gap in British naval history as written to 1988.

There is a need for senior ADF officers' biographies and autobiographies. Those who see Australia's strategic and equipment policy-making as defective would have much to learn from books which describe in detail the actions, views and arguments that led to such decisions as the FA18 procurement, the move of half the RAN to the West, the establishment of the Operational Deployment Force at Townsville and so on. It is to be hoped that senior ADF officers, and their heirs, will write — if necessary to comply with security requirements, well before publication.

Meanwhile, Rebecca John's "Caspar John" is well worth reading. The photographic portrait on the front depicts the Admiral just as this reviewer remembers him at a London Banquet — tall, sombre, eating, drinking, watching, listening, saying almost nothing until the time came for him to address the gathering.

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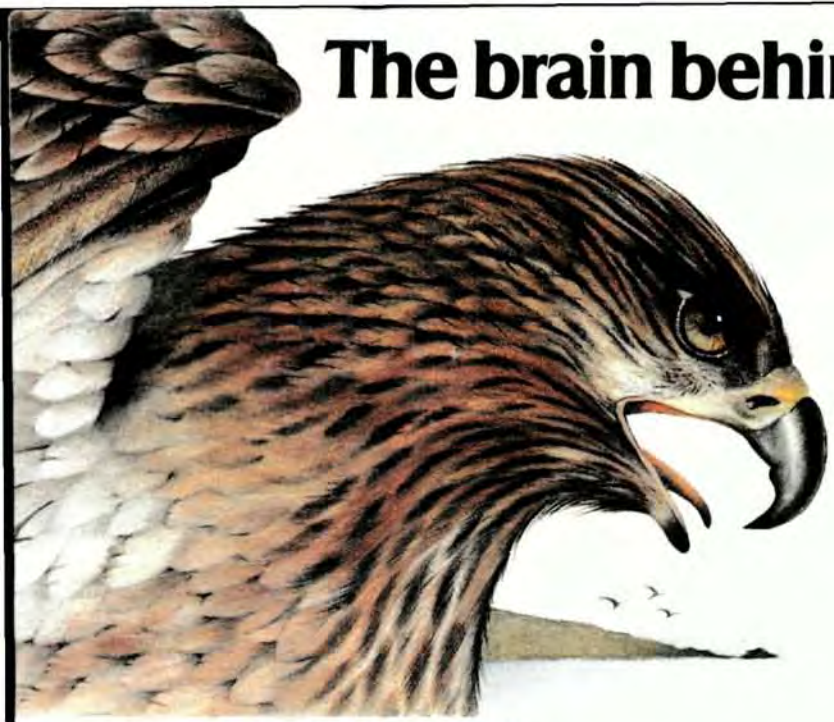

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