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(INCORPORATED IN THE ACT)

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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
   c. to publish a journal.

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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.

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.

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Cover: HMAS Success undergoing final sea trials prior to commissioning in April 1986. Photograph courtesy Command Photographic Centre.

FROM THE EDITOR

The previous edition. The photograph on its cover — remember *Stalwart* off Macquarie Island and behind the penguins — drew quite some favourable comment. One unnecessarily flippant reader though, less impressed, offered as a suitable caption, 'If we'd had our mess dinner on board, we wouldn't be stuck here now'. And at least one article provoked at least one member to enter debate. Chaplain Max Davis' reaction to Tom Frame's piece about Christianity and the RAN (and the author's rejoinder) is printed in this edition. Such a rate of response is an improvement and therefore encouraging, but I'm sure it should be much higher.

The Journal is not a commercial publication. It is not 'owned' by some magnate nor shaped for profit, but rather is 'owned' by you and should be shaped by you. If you agree or disagree with the views presented — say so. If the matters discussed are not those which you feel are important — say so. Of course you should provide redress in the form of a contribution which discusses the issues important to you. Your membership provides you with this avenue to present your views, doubts, observations and ideas for appraisal by a diverse but select group of professionals. Use your entitlement.

This edition. Four major articles are printed. One deals with air engineering and highlights issues arising from the changing shape of the RAN aircraft inventory and the role it is to play. Another analyses data collected on aspects of the service of Warrant Officers and presents some timely and significant conclusions. A third, the 1985 Peter Mitchell Prize-winning essay discusses the contribution, relevance and future of ANZUS. And the fourth draws two valuable lessons from its account of the salvage of an RAN Patrol Boat.

Regular items such as notes from 'our man in Washington, historical notes on vessels, book reviews and various notices including details of the 1986 Peter Mitchell Essay competition and details of an impending publication by the British Korean Veterans Association also appear.

The nature of our membership, with its rank titles and susceptibility to postings, makes the task of maintaining the currency of the mailing list a major one. Since Hercules is not a councillor we ask you to assist by providing advice of any rank change or change of address, promptly. The proforma on page 64 of this edition (and printed in each edition) can be used for this purpose; alternatively you should advise through a note to the Secretary or a phone call to the Membership Councillor, Lieutenant Commander S.D. Coulson, telephone (062) 653357 DNATS 8623357.

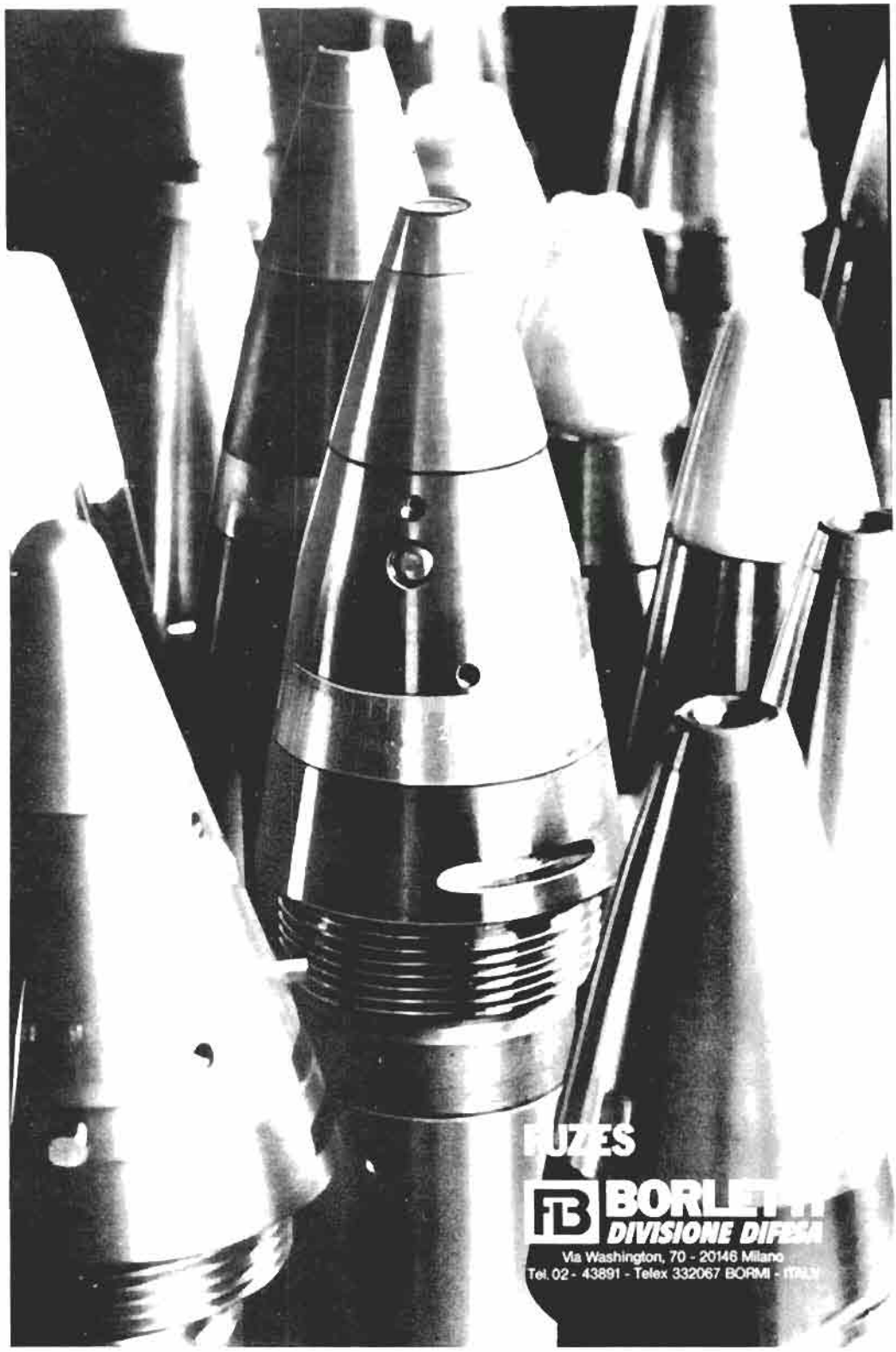
The February edition editorial advised that the November issue would be built around the theme 'Management' and that such long notice would allow thorough preparation of appropriate contributions. The field is wide — personnel management, project management, appropriateness of organizational structures, management of technology and management by technology, financial management, stores management, management training, lessons from industry and so on. Advice by intending contributors of their topic and likely length is requested as soon as possible so that material to supplement that volunteered can be solicited.

The August issue has no theme. The deadline for material for inclusion is **21 July** and early advice of an intention to contribute would be appreciated so that the edition can be shaped progressively.

I blame any reduction in quality of this edition on the loss of my Assistant Editor during its preparation — and that unfortunately in the last time I can blame him. Lieutenant Shane Moore, after an all-too-brief 'tour' has been posted out of Canberra. On behalf of the Council I thank him for his assistance and look forward to his future contribution to the ANI both in the form of Journal articles from *Creswell* and perhaps as a councillor should he return to Canberra.

A replacement Assistant Editor is urgently required. Necessary qualifications are membership and residence in Canberra. Experience, although welcome, is certainly not necessary. If you are at all interested in undertaking this task, please ring me.

John Hyman
(062–676656)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CORRESPONDENCE

RAN, Chaplains and Religion

Sir,

The article entitled *In Spirit and in Truth* which appeared the last issue of the Journal has prompted me to write so that the future discussion desired by the author may proceed from an accurate basis. The author of the article has made some allegations which are not supported by accurate research. My intention is not to be insulting but to set the record straight on a number of matters he raises. In this way I hope to support his desire for a reasoned and seasoned discussion. Let me address some of the inaccuracies.

A 'Naval' Religion

While there are some in the RAN who would like to think so, there is no such thing as a *naval* religion. The Service, reflecting the attitudes of the society from which it draws its members, is necessarily pluralistic in its religious expression. The Navy, officially, has never sought to establish its own religion, nor should it. Clause 116 of the Australian Constitution makes it very clear that there is to be no *established* church in this nation. The clause states:

> 'The Commonwealth shall not make any law for establishing any religion, or for imposing any religious observance, or for prohibiting the free exercise of any religion, and no religious test shall be required as a qualification for any office or public trust under the Commonwealth.'

The determination is that a person's religious expression should be free, encouraged and protected by the law of the land. No religion, faith, group expression, or personal belief is to be imposed on another, and no unreasonable restrictions or denominational preferences may be applied. This is reinforced by a 1973 amendment to the Defence Act of 1903 which states:

> '123B. No member of the Defence Force who has conscientious objection shall be compelled to answer any question as to his religion, nor shall any regulation or other order compel attendance at any religious service.'

Articles of War

The Articles of War of King Charles II and Queen Victoria have absolutely no relevance to the RAN in 1986. There are no Articles of War in being for the RAN. The Naval Discipline Act of 1957 listed Articles of War as Part I of the Act and included, as Article I, a legal obligation for Commanding Officers to provide for Divine Service, the Observance of the Sabbath, and the spiritual and moral well-being of their personnel. However, with the promulgation of the Defence Force Discipline Act, the Naval Discipline Act was abrogated, and the Articles of War with it. Commanding Officers are no longer directly legally bound to the duty of ensuring Divine Service, Observance of the Sabbath, etc. As Frame points out, even when the legal requirement was there, it was not often conscientiously observed anyway.

The only legal requirement a Commanding Officer has, with regard to religious matters, is an indirect one. The Defence Act does empower the three Service Chiefs of Staff to promulgate instructions for their respective Services. Religion, and Chaplains, are dealt with in DI(N) Pers 62–1 which replaced Chapter 46 of RI. As an instruction it offers some direction with regard to the policy and some advice on its implementation. Besides being weak in legal direction, it is not very well known to many Commanding (or other) Officers and so it has not been very useful guidance either.

Part-time Padres

I was interested in the article's approach to the Military Christian Fellowship. My opinion of the MCF has been formed by my experiences and is different from Frame's opinion. Far from supporting the regular church or chapel activities, members of this organisation meet only during the week and often at times already established for weekday Church services. MCF members are not as obvious at Sunday Worship. Chaplains seem to be 'invited' to attend if they are acceptable to the fellowship members. The Charter of the MCF claims as one of its aims to support the chaplain; some groups attempt to offer an alternative to the chaplain. Is it another expression of a religiously divisive effort to

establish a 'military' religion perhaps?

The MCF claims to be non-denominational. If this means ecumenical then there is a need to recognise that true ecumenism does not seek to emphasize the things Christians share in common at the expense of recognising and respecting the very real and deep doctrinal differences that exist between the various faith groups. If non-denominational means without any denominational affiliation(s), then where is the measure of authenticity that many Christians need to support their spiritual development?

There are other groups, too, that have been divisive to the naval community in the name of religious advancement. Are there to be 'part-time padres' too? Will the real chaplains please stand up?

Nominalism

While on the subject of ecumenism let me also present another element in the article which needs further comment. Christ did acknowledge that there would be difficulty in understanding and applying His Word in daily life down through the centuries, and He made provision for it by imparting His authority to His Church. We need be careful then as to how we apply His Word. Our application of the Good News should not be just our interpretation for our own convenience, but a Spirit-filled understanding of the truth being revealed. In the article, St. James' Letter is taken out of context in an attempt to justify some argument against those times when, as a specific institutional community, the RAN seeks to experience and display an ecumenical spirit in worship. These occasions are not *normal*, they are specific events in the life of this community. They do not, and never have they been intended to, replace the *normal* expressions of individual faith groups. I am one Chaplain who is privileged and delighted to have the opportunity to be involved in expressing my community's ecumenical desire to worship the Eternal Father, in addition to providing for the specific needs of the members of my own faith group. Where is the conflict?

Polarization

Lack of appropriate employment of, and recognition of the office of, the chaplain may have been instrumental in the development of some of the *different* and/or *peculiar* sects which have now become a common part of naval life. Unlike Frame, I detect a re-awakening and a renewed religious awareness in the community and in the Navy. At the same time there has been observed a polarization in declared religious affiliations. The committed are more obvious at both ends of the spectrum. The statistics of Navy personnel as at June 1985 indicate that 9.54% of RAN members declare 'No Religious Affiliation' — making them the third highest percentage group of religious affiliations in the Service.

Avoidance

I know it is just as possible for the Service person to ignore and escape the propagators of religion as it is for Mr. and Mrs. Civilian Citizen. Because, if the article equates the chaplain with the propagator, I know how often I have been avoided and ignored. If the article intends to equate the propagator with the 'mess deck chaplain' then I know that sailors have their way of ignoring and avoiding them too — eventually. Unfortunately the adverse impression these latter types leave behind makes the work of the chaplain just that much more difficult. Chaplains are trained, ordained, professionally qualified and experienced builders of faith communities and know about how to, and (equally importantly) how not to, assist in the development of a personal faith experience. In contrast to the chaplain are a few well meaning amateurs who, completely without any malice, cause doubt in individuals and division in communities.

Chapels

The article makes reference to 'numerous very expensive chapels' provided by the Navy. I am aware that there is a chapel provided at Garden Island Dockyard — was it always a chapel? I know that the beautiful chapels at *HMAS Watson* and *HMAS Cerberus* were built by public and Church donation. For the rest of my naval experience chapels have been 'made' out of World War II, left over tin sheds and vacant spaces in existing buildings that are not all that expensive to maintain. Where are these other chapels?

Concluding Remarks

The article does not do justice to the office of chaplain nor to the place of religion in the RAN either as past history or as history-in-the-making. However, I can relate to many of the feelings and longings expressed by the author. Like Frame, I agree that chaplains are an endangered species, but for very different reasons. I believe that neither the RAN nor the Chaplaincy Service has given sufficient attention to the formulation of a strategy for the effective use of chaplains in achieving the aims of this arm of the ADF. In the present organisational structure the chaplain is like a man sitting on a window sill. He can be either pulled into the room and allowed some input, or he can be left out and the window closed. Convenience and comfort are the operative principles some managers use in the employment of chaplains. The one saving grace is that this situation has not, I believe, been

deliberately intended, but has been allowed to happen as history has been made. It would seem that the chaplains are *in season* again — so were Tasmanian Tigers once.

Max L. Davis
Chaplain, RAN

Author's Rejoinder

Sir,

I am thankful to Chaplain Davis for his letter and the time it has taken him to construct his arguments. I propose to respond to his criticisms in the order in which they appear.

A Naval Religion

There is no implication in my article of proposing to establish or referring to an existing 'naval religion', the appropriate punctuation the Constitution of which I am fully aware. I have chosen to call religion as practised in the Navy, 'naval religion', the then appropriate punctuation to show that naval is being used in a contrived sense. By the religion of the Navy I reter to its particular forms of service included in ABR 408 — Hymns and Prayers for the RAN, and the occasional services as contained in ABR 5078 — Interdenominational Prayers and Forms of Service. These services are peculiar to the RAN and stress the distinctive character of the needs of the Navy and its personnel. Similarly, annual and commemmorative services have a'naval' character which set them apart. I am yet to meet a member of the RAN who would wish to defy the constitution by seeking to establish a separate religion for the Navy.

Articles of War

Chaplain Davis seems to believe I suggested that the Articles of War of Charles or Victoria somehow have a disciplinary or administrative authority over the RAN. My reference to the Articles was to establish the point that they succinctly capture something of the Christian tradition of the RN which has been subsequently transmitted to the RAN. I find it interesting that Chaplain Davis can assert that they have 'absolutely no relevance to the RAN' when the present Chief of Naval Staff Vice-Admiral Hudson was able to use the Preamble to the Articles of War of Charles II in an address to the ANI, Canberra chapter, in October 1983. He concluded that address by explaining that the RAN successfully provides a variety of functions at the disposal of the state and that: 'It is upon the Navy, under the providence of God, that the safety, honour and welfare of the realm do chiefly depend'. (A copy of the text of the speech is included in the Institute Journal, volume 10, no. 1 February 1984.)

Part-Time Padres

This is the most distressing section of Chaplain Davis' letter. It is distressing if only because he asserts the primacy of his experience over mine and as such has a negating effect. Let me say however, it has never been the policy of the Military Christian Fellowship (MCF) to 'invite' chaplains 'to attend if they are acceptable to the fellowship members'. The constitution and charter of the MCF includes, amongst other non-specific aims, the active support of Service chaplains and this most members do with enthusiasm. Others are understandably constrained to do so by either time or circumstance. Conversely, I would implore chaplains to support the MCF if that is where God's people are located. As the disciples went out to the people so should the chaplain. The clergy have no right to a monopoly on permitting or controlling Christian fellowship wherever it may exist.

I would also like to state very clearly that the MCF is in no way intentionally divisive as Chaplain Davis unfortunately asserts. It was formed to serve the particular and peculiar needs of Service men and women. It has made significant progress and brought together Christians of all ranks and Services in a way that has promoted and strengthened the cause of Christian unity.

Regarding the interdenominational character of the MCF (the Fellowship does not claim to be non-denominational as Chaplain Davis suggests), a matter I did not raise, Chaplain Davis makes several statements that are not easy to understand. If he is critical of the MCF for being interdenominational (which is definitely not synonomous for ecumenical) then this is another matter that I did not nor do not intend to address here.

Chaplain Davis also mentions *other* anonymous groups which have been divisive to the religious community. Who are these groups? Are the chaplains themselves free from indictment on this charge? My expression 'part-time padres' was coined to describe situations where no chaplains are posted either at sea or ashore. In these cases Christians are called upon to be virtual 'part-time padres'. I am not in any way attempting to run down or denigrate the Chaplains Department to which I personally have given dedicated suport.

Nominalism

From Chaplian Davis' letter it seems he has not grasped the meaning of nominalism when applied in a religious setting. However, in spite of his original stated intention to correct supposed inaccuracies he has offered several oblique remarks which are irrelevant to both my

argument and his. But I would like to point out that in doing so he has wrongly accused me of taking the Epistle of Saint James out of context. As I had just mentioned the practice at naval services of providing the better seating for those more humanly esteemed, the words of Saint James in chapter two are more than exegetically correct but intensely pertinent when quoted to comment on the issue just raised. And what of the RAN being ecumenical in its religious expression? Was this fact challenged anywhere in the article? Thus I fail to see how Chaplain Davis' remarks under the heading of nominalism relate to the problem of nominal religious expression in the Navy in any way.

Polarisation

Under this heading Chaplain Davis again makes reference to some of the '"different" and/or "peculiar" sects which have now become a common part of naval life', though he again fails to be specific. It seems as though he is suggesting that an increased lay participation in religion results in extremism, and disunity without the guiding hand of the chaplain. Without being anti-clerical could anything be further from the truth? Substantial and lively Christian fellowships have been forced to develop without the assistance of chaplains.

And in a strange conflict of words, Chaplain Davis says he is able to 'detect a re-awakening and a renewed religious awareness' in the Navy and in the community, yet he follows these remarks with figures showing that the Navy is less religious now than ever before. An abundance of figures can also be cited to show that religious affiliation in the wider community has also declined. Both Hans Mol and Bishop Bruce Wilson have detected a continuous decline in religious observance since 1965 when the general movement began away from the institutions of the Church. In sum, I am unsure of the point Chaplain Davis is attempting to make.

Avoidance

The article did not attempt to equate the professional propagators of religion with the 'mess deck chaplain' as Chaplain Davis seems wont to label non-ordained Christians. At that point in the article I had made reference only to chaplains as the propagators of religion. However, Chaplain Davis again launches into a series of criticisms of Christian people who attempt to share their faith presuming to conclude that they invariably have an 'adverse impression' on those around them. Would Chaplain Davis have us believe that 'positive' outcomes could not occur? I know of many people who see the faith of Christians around them as being more relevant to them than that of the chaplain from which it is, at the least, expected. Perhaps this can limit the chaplain's impact on those he meets. But further still, Chaplain Davis attempts to build a very clerical description of Christian ministry by suggesting that *only* chaplains have an understanding of the Christian faith and how it is strengthened. The notion of chaplains being 'professionally qualified' also requires comment. I have long believed that only God determines those who are really qualified and those who are not. Does this qualification always equate with ordination? It is naive for Chaplain Davis to believe that chaplains will invariably have a helpful function when it comes to the 'development of personal faith experience', whatever that means. The suggestion that lay ministries are somehow amateurish is repugnant to the doctrine of the New Testament and an offence to those who fulfil them.

Chapels

The triviality of this 'criticism' is hardly worth a response. The point being made is that elaborate ecclesiastical buidlings are provided and maintained and thus should be utilised in an effective and creative manner and not as theatres or auditoriums.

Conclusion

I find it hard to believe Chaplain Davis can say that my article 'does not do justice to the office of chaplain' for two reasons. The first is that he does not outline or substantiate such a charge anywhere in his letter. Secondly, I offered no criticism of the chaplain's role or of individual chaplains. I made it very clear that I believed it was the Navy which 'appears to be losing its perception of the benefits that come with having a chaplains department' and followed this contention with two historical quotes illustrating the esteem which has followed the naval chaplain throughout the long history of his service. My conclusion was that 'chaplains have been considered vital to the overall functioning of the ship'. It is also humorous that Chaplain Davis admits to agreeing with something I did not say. Nowhere in the article did I enunciate an opinion that chaplains were an 'endangered species' but strangely Chaplain Davis can then imply that I have somehow treated chaplains like the hunters of old who sought to exterminate the tasmanian tiger. As I have shown this is far from the truth.

Unfortunately Chaplain Davis only brushes past the heart of the article and fails to level criticism at the primary issue I have identified and discussed. However, I am pleased that some debate on the whole area of religion in the RAN has taken place and look forward to more debate in the future on this crucial aspect of naval life.

T.R. Frame

RAN AIRCRAFT ENGINEERING TODAY

by Captain D.S. Ferry, M Sc, RAN

After paying off the Skyhawks and Trackers in 1984, the Fleet Air Arm has contracted. In fixed wing aircraft it now operates the HS748 (for electronic warfare training) and in helicopters, the Sea King (anti-submarine) and Wessex, Iroquois, Squirrel and Kiowa (all utility). These aircraft operate from the Naval Air Station at Nowra NSW and helicopters are deployed to four FFGs (Squirrels) the destroyer tender and flagship *Stalwart* (Sea King) and the survey ship *Moresby* (Kiowa). Various helicopters deploy to the landing ship *Tobruk* and a Wessex will be embarked shortly in the new replenishment ship *Success*. The four FFGs and two more now building at Williamstown Naval Dockyard will be equipped with the new Seahawk anti submarine helicopters after these enter service early in 1989. The Fleet Air Arm anticipates that further new surface vessels of any size will be equipped with helicopters.

Aside from these activities the Fleet Air Arm provides the core air capability for Navy force expansion if required, including the further utilisation of helicopters ashore and afloat and, if needed again, an afloat fixed wing capability.

With the dispersion of embarked aircraft which has now occurred, compared to the days of most deployments being concentrated onboard *Melbourne*, we now have a very different Fleet Air Arm. This article, which incorporates various suggestions from DNAE staff, summarises how the new roles are supported by the Navy air engineering organisation.

THE AE ORGANISATION

It would make the rest of the article hard to follow were there not a brief coverage of the overall organisation, and a reasonably comprehensive treatment of the policy-setting element, DNAE. While a brief description of other organisational elements is also added, a comprehensive description of them is left to another time.

DNAE

The Directorate of Naval Aircraft Engineering in Navy Office, Canberra has a mixture of some 30 Navy and Public Service engineering, technical and administrative staff. The responsibilities of the Directorate are as follows:

- **Design Approval.** The Directorate participates in studies into future aircraft and air equipment requirements and options, contributing mostly in areas of design and performance assessment and, later, specifications. DNAE is the Navy aircraft design approval authority, determining the tender and contract information requirements, identifying design shortfalls, and stipulating the testing requirements for contract acceptance and proving of the aircraft before release into service. Major modifications to aircraft in service are treated similarly in a design approval sense.

The Author

Captain Ferry joined the RAN at 13 and completed four years training as a cadet midshipman. After sea training on board the training frigate *HMAS Swan* and general advanced naval training at Dartmouth, he had two years on board *HMAS Voyager*. Air engineering training at Manedon followed, then a stint as the air engineer officer of 724 Squadron (Venoms, Gannets, Vampires, Dakotas, Fireflies). Reflecting the 1959 temporary (reversed in 1960) closure of the Fleet Air Arm, the Squadron was about half manned he recalls and had a quarter more aircraft (up to 23) than it should have had.

Post-graduate air engineering training at the Cranfield Institute of Technology (UK) followed, where he specialised in aircraft propulsion. His thesis dealt with a Canadian programme for the launching of satellites from ex-USN battleship guns using liquid propellants.

He briefly had command of 817 Squadron and then became its air engineer officer when that unit was first equipped with the Wessex MK 31B. Tours to *HMAS Melbourne* followed and he took over as the ship's air engineer officer in its early years of operating the Skyhawk and Tracker. He had the misfortune to be on board *Melbourne* during her collision with both *Voyager* and *Evans*.

In more recent times he has had staff appointments in the Aircraft Maintenance and Repair Branch in Sydney, in the then Directorate of Fleet Maintenance, in Washington, at JSSC and as the Director of Naval Aircraft Engineering.

- **Support Definition.** Also, the Directorate describes requirements for support including the technical information needed, the required reliability, and maintainability, the policies to be used for spares and support equipment identification and quantity assessments, and those for later maintenance. Maintenance policies outline what work is to be done, where and by whom and part of the Directorate's task is to determine the Australian Industry Involvement in major procurements which is needed for future support.
- **In-Service Support.** The Directorate sets the air engineering policy needed for airworthiness and the expected utilization in service. The policy includes maintenance trade structure, defect analysis systems, the regulations for maintenance and the administration of movements of aircraft, engines and some major components. As well, this policy outlines the distribution of engineering effort in support (including design of repair schemes and modifications) between manufacturers overseas, Australian contractors and various Naval personnel and public servants at the Fleet Air Arm main engineering agency, the Aircraft Maintenance and Repair Branch. The Directorate also advises on maintenance manpower levels required in squadrons, flights and NAS Nowra Workshops.
- **Aircraft/Ship Integration.** DNAE sets policies needed for the safe and effective operation of helicopters from ships, including some ship design requirements and the flight and other trials needed to establish operating limits for ship certification. Aside from the need to be able to operate safely in this environment, aircraft securing, handling and maintenance arrangements need to be specified and assessed.
- **Monitoring.** DNAE has the further function of seeing that suitable levels of airworthiness and utilisation are actually realised in service.

Those familiar with the work of military aircraft engineering organisations will know that the above is not a bland task recital.

The striking features are, firstly, the need for the *naval* airworthiness policies, as distinct from those applied by the Department of Aviation for civil aircraft and by the RAAF for the aircraft it operates. The nature of airworthiness can be a mystery to many and there have been strenuous recent efforts in the Directorate to draw up manuals and instructions which dissect and explain the interpretation of the word within the Navy. Briefly, the concept centres around: the setting of design standards, themselves evolving with experience and technology; determining who will accept responsibility for aircraft design testing; their competence to do so; and the records of design and testing needed. Airworthiness policy needs to describe the continuing responsibility of this design authority in service, to ensure the design is up to the actual stresses encountered in use and to account for the consequences to design integrity of any configuration changes introduced through modification and repair schemes. Maintenance policies need to be integrated fully with the characteristics of design, the results of testing and the engineering experience in service. Of particular importance is the careful and formal reporting and analysis of defects in service, the organised pooling of information with other users of the equipment concerned, the routine flow of data on experience in each Service and centralised assessment of it. One other feature of the airworthiness equation is the discipline in the use of aircraft by operators to within prescribed limitations contained in release documentation. So the key features of airworthiness which distinguish it from seaworthiness and roadworthiness are the comprehensive approach to feedback and analysis of experience, comprehensive operating instructions aimed at control of equipment use based on that experience, and a clear and formal identification of the responsibilities and authorities of users, maintainers and the engineering organisation.

The second striking feature in DNAE tasks is the need for the Directorate to monitor, or oversight, the achievement of airworthiness and aircraft availability. This requires routine data flow from the field, such as that on the suitability of maintenance training, and detailed information on where maintenance effort is going. It also obliges the DIrectorate to prompt action and changes where it is not satisfied with events and steps taken. In the military environment the issue of the directives needed (modification and maintenance instructions, the analysis of incidents, the suitability of support contracts) and the checks needed to ensure their compliance, are not always compatible with the nature of military command with its implied automonies.

The third feature is the centralisation of aircraft engineering policy making. The Directorate is in the Naval Engineering Division, whose organisation contains the larger engineering and maintenance branches needed for ship and ship weapon system support, i.e. the Design Branch and the Fleet Maintenance Branch. These Branches contain several Directorates. The Design Branch provides much of the engineering support needed for ships and submarines and the Maintenance Branch is responsible for ship and submarine maintenance and maintenance policy. Because of the centralisation of air

engineering within DNAE, which arises from the different scale and the concepts applied to aircraft engineering, the Directorate is considered to be a branch in its own right and is under the direct administration of the Chief of Naval Engineering. The Directorate is located close to the Directorate of Naval Aviation Policy, which is the Fleet Air Arm directorate for operations. That arrangement permits a maximum responsiveness on DNAE's part to operational requirements. The 'dotted lines' between these directorates, of different Navy divisions, are strong and necessarily so.

DNAE and SAMR between them provide the Navy air engineering support that is provided on the larger scale for ships by the Design and Fleet Maintenance Branches, the Garden Island Dockyard Technical Services Division and elements of the Naval Support Command.

SAMR

the Superintendent of the Aircraft Maintenance and Repair Branch in Sydney has some seventy civilian and thirty uniformed engineering, technical and clerical staff and provides the focus for engineering day to day support for the Fleet Air Arm. SAMR manages deep maintenance and repair of airframes and engines by contractors and is responsible for maintenance schedules, modifications (200 per year), repair and overhaul specifications (5800 total), the specification of alternatives to parts used in maintenance and which are unavailable (8000 total), engineering concessions in maintenance, the assessment of defects referred there (200 per year), and monitoring the performance of aircraft systems in service.

SMAR has an outposted element at NAS Nowra, the Aircraft Maintenance and Flight Trials Unit (AMAFTU), 13 strong, which conducts various aircraft and equipment trials to determine performance, operating criteria and acceptability. In recent times the AMAFTU has been very involved with the First of Class Flight Trials needed for each ship/helicopter combination.

SAMR arranges the directives needed for airworthiness achievement, identifying equipments which require special inspections or require modifications. He issues these as the Sydney element of DNAE on behalf of the Chief of Naval Staff. SAMR was set up originally as a Sydney-based, DNAE assistant director and hence had no separately published terms of reference. This arrangement is now being altered, so that while in the future he will continue to remain responsible to DNAE for implementation of airworthiness policy he will be responsible separately to the Naval Support Command for contractor deep maintenance of aircraft and engines, and for providing any advice to Supply Managers over and above the information contained in airworthiness directives. SAMR terms of reference will be published shortly and will detail his double-hatted responsibilities.

SAMR is located near his chief counterpart on the supply side, the Supply Manager (Air) and this goes some way to simpllifying the administrative problems coming from the extensive business they do together. Curiously, the SM (Air) has a maintenance function in that he arranges the overhaul and repair of most assemblies and sub assemblies (as distinct from complete aircraft and engines) at contractors, and also lets work out to the workshops at NAS Nowra. In doing this he relies on SAMR to draw up the necessary specifications of work to be done, to advise on any concessions needed in the work, and where needed, to advise on work priorities.

NAS Nowra, Embarked Flights

At the Air Station the engineering organisation has the character of maintenance and maintenance control. One major element, the Aviation Standards Group (ASG) is responsible for monitoring the general aviation standards achieved by ships flights, by the three squadrons and by the various workshops at the base. The other major engineering section is responsible for the workshops' administration and output.

Squadrons have their own integral air engineering support which is again mostly concerned with maintenance and maintenance control. The maintenance organisations of flights are headed by Chief Petty Officers, specially qualified, who rely where needed on advice from their parent squadrons, the ASG and SAMR.

Obviously enough, the size of the Navy air engineering organisation has now been reduced by removing the manpower which was needed for the Trackers and Skyhawks and their special skill requirements.

RECENT AE WORK IN FAA

Squirrel

At this point we leave some of this drier stuff and talk about the sort of day-to-day work now being done. The Squirrel is an example. We were quite cautious about the suitability of this aircraft for work at sea and would have preferred an aircraft designed with that work in mind. Nevertheless the economics of the day and the plan that the aircraft was to be placed at sea only on an interim basis pending introduction of the new FFG antisubmarine/anti ship surveillance and targetting helicopter, (now chosen as the Seahawk), overrode other factors.

The Brazilian Navy had operated the Squirrel to large ships and a large number had operated

Mechanical Workshop NAS Nowra *Photo courtesy NAS Nowra*

over the sea to Gulf of Mexico oil rigs, but we had no real indication of its suitability to operate to our FFGs; and much of the earlier experience had been with a different engine. Aerospatiale, the Squirrel manufacturer, is now developing some experience of the features required generally for operating helicopters from small ships, in their proposals and campaigns for marinising their Dauphin helicopter and placing the Super Puma at sea. But Aerospatiale has not really assumed the normal role of design authority for the Squirrel in its use in our FFGs.

The Squirrel was a joint RAAF/Navy procurement, managed by the RAAF. While special items such as emergency flotation equipment were obtained for the Navy aircraft and RAAF project staff made great efforts to assist us with our information needs post-contract, Aerospatiale was not contracted to look into some vital marinisation matters and we continue to have difficulty with these now.

Some of the characteristics needed for an aircraft for use from small ships are agility (especially vertically); a suitable undercarriage strength to accept landing loads and configuration for handling and to resist toppling and sliding; rotor brake, rotor fold, tail pylon fold; the strong securing points needed to resist rolling and sliding with the aircraft hangared (ships rolling 40 degrees plus); and resistance to electromagnetic interference (e.g. with radio altimeter, engine controls, the squibs which operate emergency systems, instruments). The aircraft needs the robustness to withstand the forces of manhandling, and the durability in fatigue terms to resist the acceleration and vibration forces at the stern of a ship when secured, plus the unusual loads caused by turbulence during rotor engagement, and during take offs and landings. Materials and preserving finishes need to be suited as far as possible to the maritime environment.

The Squirrel was suitably marinised in some areas but not others and little proven for small ships' use. We needed to do an extensive number of modifications before it could be embarked, and very quickly to meet the embarkation timescale. Flight trials had to be conducted in FFGs, aircraft securing plans had to be worked out and some aspects of strength and durability had to be examined with the manufacturer. We had to find a novel and safe means of trialling the aircraft in the actual in-close FFG radar and radio electromagnetic

environment as this would have taken months and a fortune to do separately in the few suitably equipped land based facilities able to do it world wide. Before releasing the aircraft to out trials, a failure mode analysis had to be undertaken to examine the possible consequences of interference being encountered. In the event, the trials themselves utilised a barge with a Squirrel onboard, near an FFG, to get an indication of problems, and then flight trials followed.

The high powered radars and communication equipments fitted to warships, the need to approach these closely now in landing and take off, and the increased use of avionics in aircraft have increased the potential for interference problems.

We have not yet been able to prove the durability of the airframe fully and we continue to seek a suitable stress measurement program with Aerospatiale. Meanwhile the program of inspections we now conduct is intended to cover possible problems. Bear in mind that robustness is not a natural feature of helicopters, as it is inimical to lightness.

The Squirrel has some novel features such as 'plastic' (composite material) main rotor blades and parts of the fuselage. We have encountered airframe cracking already in several places not seen in the RAAF Squirrels. The aircraft have been repaired and strengthened, but this cracking remains an indication of the type of problem which can be expected. We thought also we had a major early problem with engine corrosion but fortunately this has proved not to be so on stripping of the engine concerned.

Seahawk

The selection and specification of the Seahawk and the contract negotiations for it both proved exacting. The Navy is taking an airframe and engine combination which has been proven for our environment; but the avionics system to be fitted is largely new to fit our roles, and through its data base technology, to provide adaptability between roles. It offers increased potential for adaptations of the aircraft in the future. The aircraft can be expected to last well beyond the time its avionics systems will become obsolete, in the same way as the Wessex systems became obsolete, and the Sea King's will. The adaptability of the system allows the aircraft to remain operational economically, for longer.

We will also be accepting some lesser airframe variations which are being developed for the USN. Regrettably though there are two changes which may not be developed by the USN in our timeframe, these being the development of an aircraft flotation system which will provide a satisfactory potential for aircraft and equipment salvage if the aircraft lands in the water; and an accident data recorder.

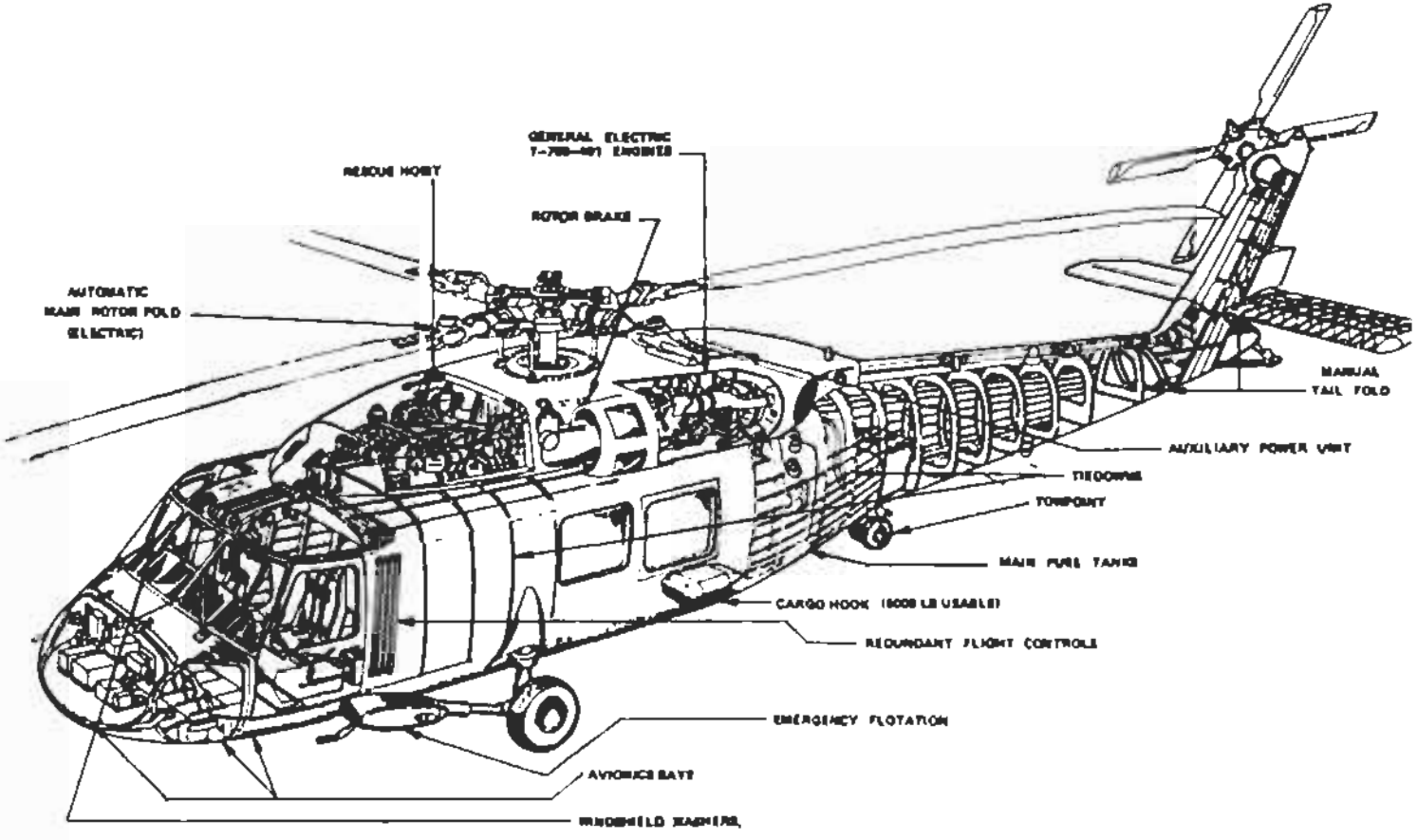
It is Navy policy to fit accident data recorders, in common with trends worldwide, but it is too expensive for full development costs to be carried by the Australian project. Possibly some Australian development of these modifications might provide a happy blend of cost, capability and timeframe especially if the USN could be interested in this approach.

An area of uncertainty still in the integration of aircraft like this into small ships is the sort of weather in which safe helicopter operations should be expected. The potential for extending the wind and ship movement envelopes of aircraft operating from ships is a topic we have asked the Aeronautical Research Laboratories in Melbourne to explore, as simulation, analysis and predictive techniques are less than fully developed even in the larger navies.

The subject may be of general interest to readers. The mixture of variables includes the following:

- the sea states which can be expected in the area of operations, as described by both their extremity and their probability;
- the ship characteristics in these sea states, themselves depending upon size, hull shape, whether stabilisers are fitted and whether flying operations will be conducted at ship speeds where these stabilisers are effective;
- the distance of the flight deck from the ship centres of roll, yaw and pitch in terms of deck movement and adequate freeboard;
- the characteristics of aircraft 'recovery assist' hauldown, the flight deck weapons loading and handling equipment fitted to the ship and the residual thrust developed by the aircraft main rotor in a cross wind (and tending to lift the aircraft as the ship rolls);
- other aircraft characteristics such as undercarriage width, tail rotor control and whether there is deck space to land askew across the deck, into the wind;
- the tactical freedom to find a benign course to minimise ship movement;
- the type of night and voice communications landing aids available and the operating restrictions due to poor visibility and night operations which are acceptable;
- safety margins, pilot skills (aptitude, experience currency) and skills on the flight deck during flight operations and weapons loading.

These are difficult areas to specify and evaluate still, and a variety of trade offs is possible. For example, if an aircraft has an equipment failure such as in a hydraulic control system or the ship hauldown system is not working it does not mean necessarily that the



Seahawk

Diagram courtesy Sikorsky Aircraft

aircraft will need to land with reduced safety margin. Instead some loss of tactical freedom for the ship could be accepted and the ship turned onto a course to minimise deck movements. Likewise aircraft operating weight, that is range, endurance and weapons load, can be traded off to gain a safe margin for operations through increased aircraft agility.

Another Seahawk matter which might interest readers was our failure in contract negotiations to have the contract reflect Sikorsky as being responsible in the airworthiness sense for design of the Seahawk. This stemmed from two factors; namely that Sikorsky had not tendered on the basis of taking this responsibility, and also the US Services had had a say in some design features. The backdrop to this issue is that of liability, not only for design failure but for the secondary consequences of it, and there has been extensive litigation against US aircraft designers/manufacturers in recent times.

A further point about the Seahawk is that the aircraft will be deployed in ones and twos to ships with limited space for maintainers and spares. In *Melbourne* days our trade training was broad, owing to maintainer berths being limited in number, and we adopted a system of opportunity servicing to cope with vagaries in operations and harbour time. While we will develop further this approach there will be lesser likelihood than in the *Melbourne* of having spare aircraft available to substitute for aircraft which are unserviceable for lack of spares. This places more pressure on our ability to analyse our spares requirements thoroughly and get them in place and there on time. We have obtained access to a proven availability-centered model used by the USN, which is being developed further to suit our purposes.

In other data systems areas we are now developing the detailed configuration management systems necessary to ensure adequate configuration control of the Seahawk and expect to be able to interlock these electronically, by further enhancement, with Navy Supply EDP systems. In support systems terms we are almost ready now for Seahawk.

MAJOR PROJECTS GENERALLY

In projects such as the Seahawk the DNAE responsibilities as design approval authority, and for the specification of the characteristics needed for future support, have been blurred by the changed approach these days to major projects. Project staffs now carry more autonomy than hitherto and under the current approach their job is to see that, above all, the equipment concerned is delivered on cost, on time and to contract specification. These objectives are not always compatible with air engineering needs. It is unrealistic to assume we can identify 100 percent of these needs early in a project, to have them accepted at the tender stage, or to have all applicable air engineering policy approved and published before contract. This is not to imply any criticism of our most capable project staffs. But while it was seen earlier to be necessary to give project staffs the decision making authority needed to match their tasks, compared to the bad old days of insufficient authority, it may prove in the long run that ther has been an over correction.

It is an indication though, and there are others, that requests for tenders and the tenders themselves should not be regarded as set in concrete early and we should have a means of coping with necessary variations. It is wise for projects to increase their contingency allowance in their bids for funds if they have not gone through a full project definition study. In the Seahawk case, time did not permit a project definition study as neither did it in our earlier experience in acquisition of the HS748 Electronic Warfare Training System (EWTS). This type of study would have been helpful in tying down our total need for funds more closely and in avoiding having a mini definition study running with contract negotiations.

Pilotless Target Aircraft

The Navy has just taken delivery of a new model Jindivik in sufficient numbers to last some years. The Navy has now organised the operation and maintenance of these aircraft for some eleven years during which time the attrition rate per flight has dropped by a factor of twelve. The next step in supporting this system is to replace the aircraft ground control system. The current system is close to being insupportable owing to much of its technology being of the fifties and it being long since out of production. First though we are trying to determine the concept for the new system and the Government Aircraft Factory in Melbourne is providing a major input into this.

Other Helicopters in Service

There are also various other studies under way regarding modifications to aircraft in service.

The Sea King will continue to be useful for many years and these aircraft are still being produced in the UK. The airframe is big and endurance is good, but the engine basic design comes from the late fifties. Those of us that remember the Gannet will recall that it was designed to fly on one engine in the cruise to save fuel, (and, yes, it did so quite frequently for less palatable reasons), but helicopter main gearboxes do not in general permit this.

Wessex preparing to launch from Stalwart *Photo courtesy J.A. Hyman*

The Wessex and our four Iroquois are both old. The RAAF has replaced their Iroquois of the model the Navy uses with the Squirrel, and the Navy will need to pay off this aircraft before very long. The Gazelle-powered Wessex is several years older than the Iroquois. The RAN is now the only operator of it and its life will be limited by the availability of Gazelle spares. We have broken down some second hand engines obtained from the Royal Navy for the purpose after the RN stopped using the engine and these spares will be the last. The need to hold onto these old aircraft arises from the Fleet bids for flying hours and our tasks. While they are both old and very expensive to maintain in both spares and manpower, still the capital cost of replacing them is very high and it is economic to continue to use them until replacements are forthcoming.

We should aim in future buys to standardise within reason to achieve procurement and support economics, but while costs can be reduced through standardisation it should be remembered that occasionally aircraft as a type are grounded and having more than one type provides some back up. Likewise, some diversity in aircraft leads to several sources of support. This can reduce the scope for interference in our operations through lack of supply support or the threat of withdrawal of this support.

In the Wessex case we are posed with a common engineering problem worldwide: the question of retrospectivity of revised standards Some materials used in the Wessex in areas important to airworthiness are not consistent with the confidence expected from like materials now. Bear in mind too that the Navy these days specifies twin engined helicopters for use over water. Does this mean that the single engined Wessex should be paid off? If not, how much over water flying should it be required to do? At the time of the Mexico City earthquake there was a comment on ABC radio that the buildings which collapsed in the earthquake pre-dated the adoption of earthquake-resistant standards. Should these building have been demolished on introduction of the new standards?

In the case of helicopters, a commission in the UK set up to investigate their safety has come to the conclusion that new standards must be adopted retrospectively. The effect of this probably will be withdrawal of some helicopter

types from North Sea operations, the S61 (the civil Sea King) being one. The matter is made more complex by the application of reserves in design being reduced as design standards are refined. Designs to older standards can be robust through these greater reserves.

Also in the area of retrospectivity of standards, the Wessex and Sea King were not cleared for electromagnetic interference from ships in the way they would be if designed and tested now. We know of recent examples of interference which can affect the airworthiness of aircraft, although not to these aircraft types fortunately, and we regard the extensive earlier experience with these aircraft types in the Royal Navy and here as being sufficient for our current clearance. The sort of thing that needs to be borne in mind though is that we have different electrically operated sonar cable cutter cartridges fitted in our Sea Kings to those in the RN and the USN Sea Kings which use these cartridges are of quite different design. The Directorate of Naval Ordinance Inspection provides detailed advice to us in this area.

Of course the elimination of the electromagnetic hazard is possible by switching off ships' emitters when aircraft are close, but this can be unacceptable to operations. As it happens there are now new standards for personnel exposure to electromagnetic radiation which again can limit operations. While aircraft design can eliminate electromagnetic hazards to equipments from internal, external and nuclear weapons sources if necessary, helicopter fuselages offer no significant protection to aircrews. Necessarily, we are in contact with the Department of Aviation and RAAF on issues like these, alerting them to the risks from Navy radio and radar emitter sources.

Ship Integration Activities

In the ANI Journal of November 1981, the then Commander I.M. McIntyre covered the aircraft/ship integration topic generally and what now follows is an update to that article.

Aside from the integration of the Squirrel and the planning for the Seahawk, the myriad ship and helicopter combinations possible (which include embarkations of RAAF and Army aircraft and those of allied navies) call for the setting up of standards but they are not all appropriate. Again one of the key features is retrospectivity. We have novel ship combinations in using the Wessex and Sea King onboard ships designed in Australia, the US and France.

Generally, selection of aircraft types, equipments and ships from a wide range of countries is only possible if we have the expertise in the RAN to arrange the specifications needed to meet our requirements and the trials needed to prove our intended uses. We are a party to standardisation agreements with our major allies and this helps. But in the ship integration field there is a long way to go yet. A step forward will be the production shortly of a document which will facilitate aircraft cross operations between the USN and RAN in the Pacific. We also take careful notice of NATO standards, even though the RAN is not a party to them.

Incidentally, in applying the USN standard for the strength of aircraft securing fittings onboard ships we found those designed into *Stalwart* and *Tobruk* to be quite inadequate. The needed steps have been taken, but as these securing points were designed to an RN standard, we referred the question to the RN, to their interest. Flight deck strengths internationally are designed around aircraft undercarriage collapse loads, as well as taking into account the loads secured to the deck and tyre 'footprint'. Hence deck strength could be higher for a light aircraft than that for a heavy aircraft if the former has a stronger undercarriage, and some judgement is needed.

One last comment on the retrospectivity of standards is our need to review the results of the ship integration flight trials conducted by the Navy and RAAF in earlier days, when there was less rigour applied to analysis and standardisation of results.

RELATIONSHIP WITH RAAF

The RAAF provides supply support and some engineering support for the Navy HS748, Kiowa and the Squirrel, in areas common to the RAAF equivalent. The Navy responsibilities are in the airworthiness of the naval aircraft overall, including the effects on the aircraft of our particular use of it; the support of some joint Navy and RAAF equipments fitted to the Squirrel; and for any unique Navy modifications such as the HS748 EWTS.

Navy also uses RAAF systems for maintenance and engineering data manipulation where these are suited to the Navy effort. Bearing in mind the centralisation of Navy support, the use of the RAAF systems, which often are designed to suit their widespread bases and different aircraft types, is not always efficient.

In the light of the then projected paying off the *Melbourne* and the Skyhawks and Trackers, a study was conducted in 1984 into whether responsibility for future Fleet Air Arm engineering and supply support should be passed to the RAAF. The study included representatives from Defence, RAAF and Navy. It concluded that there was a need by Navy for in-house air engineering support to meet the priorities of its operational requirements, especially in new equipment selection, modifications and ship integration. A typical example of this recently was the enhanced priority the Navy gave to

Seaking launching from Stalwart

Photo courtesy Command Photographic Centre

modifying the Squirrel quickly so that it could be deployed to sea. Another case has been the replacement of the Squirrel search and rescue hoisting winch in the Navy aircraft, with the necessary modification work. The original winch gave both the Navy and the RAAF trouble and the Navy was unable to live with this in its need for winch SAR and utility use at sea.

Because of the peculiarities of naval operations (e.g. ship integration, opportunity servicing of aircraft, a broader trade structure) a considerable interface overhead with Navy would be needed even if the RAAF provided aircraft engineering support. The 1984 study concluded that there was insufficient potential advantage to be gained from RAAF support to disturb present air engineering support arrangements. The study concluded also that supply support and engineering support are inseparable, and hence Navy should continue to provide its own aircraft supply support; although the study group did not have time to look in detail at UK experience. There, the RAF arranges most aircraft supply support for the RN, which retains its own engineering support.

Because of these factors and the disruption of change, the study concluded essentially that current arrangements should remain. Naturally the question of the split of engineering, supply and maintenance support for Seahawk/ Blackhawk will arise should the latter be chosen for the RAAF utlity helicopter.

In short, aircraft engineering in the Navy has some specialised features, not the least of which is the network of liaisons with other Navy activities. Navy should have its own air engineering capability as long as this can be structured efficiently and as long as the capability is given enough work to keep it of self regenerative size, that is, above 'critical mass'. The Navy is obliged to the RAAF for its support in the areas of special skills, items of common equipment and special equipment areas (ground radar, fire trucks) and in some broader policy areas. Likewise the Navy has made some contributions to areas of joint policy interest.

The current single-Service management arrangements outlined above and others (such as Navy support of RAAF Harpoon missiles) provide an efficient framework for mutual support. They keep the extent of duplication of activities to a reasonable level bearing in mind the differing requirements placed on the individual Services for the preparation and readiness of their elements.

INDUSTRY SUPPORT

Industry Support is another area where we remain in close contact with the RAAF. It has endless scope for controversy. In talking about the Fleet Air Arm need for industry support it is necessary to place this in the context of industry support to Defence generally and of Defence air operations, before discussing the Fleet Air Arm subset. There are several driving factors in trying to determine how much industry support we need and can pay for.

One factor is the need to support any co-ordinated national effort to build up the national aerospace infrastructure, the same as other national infrastructures of defence significance, although the Government needs to set the priorities here and decide the degree of support that is appropriate and from whence it should come. A second factor is support for the building up of aerospace manufacturing capabilities needed specifically for defence support. The key to this requirement is the extent to which Defence can continue to rely on overseas aircraft material sources and the cost and lead time for building up and sustaining a capability in Australia. Being able to build airframes in Australia in peacetime may not provide a reliable source of wartime supply if we cannot then get engines for them or the materials from which to make the airframes. We need to inject any defence dollars and other support into industry in areas where these will do good. There needs to be an integration of our industry campaign with our assessments of the reliability of overseas sources of supply in different circumstances and the potential for substitutions for hard-to-get items. Some of us suspect that in aerospace in the current climate the most sensitive area may be consumable munitions like missiles, which could become scarse very quickly in a conflict. The nub of the matter is that emphasis needs to be given to areas of support risk such that warning times for building up operating capacity and endurance on one hand, and industrial support lead times on the other, are kept compatible.

Then there is the requirement for the design and technical services support for adapting equipments to our local needs. These services can be obtained from overseas manufacturers, but there is always the question of their responsiveness in a crisis. This is one of the more difficult skills to sustain in Australia without it resting on a local design and manufacturing capacity which is relevant and kept exercised. In the defence scene now the aircraft engineering capacity could well be generated as a by-product of a manufacturing industry reliant essentially on commercial work, similar to many other areas of defence support.

Major avionics systems engineering capabilities are tied to development of the electronics industry and there has been some innovative work done in recent times for Defence. The support capabilities we see as being needed are those needed for adapting

overseas sensors and having the potential for production of hard-to-get items; with reverse engineering if needed. With increased rates of effort we will sometimes need more spare assemblies and sub-assemblies to fill the pipelines than we found economical to buy with project funds and these can be difficult to get. If out of production overseas, their acquisition can be impossible unless we have our own manufacturing capability.

In the Seahawk case, DNAE has been unable to identify specific Australian industry support capabilities needed and which should be nurtured other than in software support. In the main, the work which will flow to Australian industry as a consequence of the Seahawk contract will be directed towards other, more general, targets. We aim to do the maintenance on the aircraft and its major assemblies in embarked flights, in squadrons and at NAS Nowra workshops, thereby retaining suitable skill levels in the Navy, and keeping the Air Station reasonably manned post-Skyhawks and Trackers (as the Government requires). This approach assists in minimising repair pipelines and thus the cost of spare assemblies needed to fill them.

Our intention is to use industry where economical. This will apply especially where there is already a suitable overhaul repair capability in existence for assemblies, and in the repair of components needing special skills and equipments. Frequently it will not be economical to obtain the information, skills or equipment needed for sub assembly work at the Air Station and this will be identified during our maintenance level analyses, being undertaken progressively by SAMR. In some cases our expected arisings might be too few to be able to sustain skills in Australia using normal practices. The options are to let this work to a reliable overseas agent or to buy in the extra spare items so that we can either repair after accumulating a batch, or discard the item if it is not economical to undertake repair.

Naturally, contracts for maintenance work will be let under normal tendering arrangements and we will be aiming where possible to see that open retendering of work will be possible later, rather than having the work embedded in one firm.

This policy is not fully consistent with Sikorsky being given freedom to place contracts with Australian sub contractors of their choice under Australian Industry Involvement arrangements, although as implied earlier, production contracts do not lead necessarily to support contracts, or at least monopoly contracts. Likewise there can be a difficulty where license work is involved, that being if the manufacturer will not release the technical information needed for repair and overhaul thereby allowing agents other than his Australian licensee to do the work. Sometimes also he will hold proprietary rights to himself. In this case we may well need to return the item overseas for repair.

A licence/proprietary rights approach in effect allows the manufacturer to designate the maintenance agent. This can have advantages. For example the licence arrangement might give a better prospect of control of the quality of work, and again the licencee might get in his own spares, making his achievement of the required turnaround times more likely. It can be seen that there can be hazards in this type of arrangement, with the reliability of support of the Defence capability concerned being subject to various industrial, commercial and possibly political considerations not necessarily known to us. There may be perhaps no 'surge' capacity available (eg. the contractor holds minimal spares stocks), and we may have a reduced ability to tell if we are getting good value for our maintenance dollar. There is also a problem with licencee recognition for the purposes of ensuring that he applies repair standards and specifications which are suited to our airworthiness needs.

In the Seahawk case our aim was to see that all subcontractors to Sikorsky would be obliged to provide all required repair and overhaul data under their contracts, in part so that we could seek alternative suppliers to those that would not agree to this. Regrettably again this aim has not been realised, one reason being Sikorsky not finding it feasible to put the proposed arrangement into effect with existing sub contractors or with those sub contractors supplying both our production line and the major production line, that for the USN.

Aiming for maintenance work by contractors at the Air Station utilising the Air Station facilities might be a part of the answer to reducing the amount of 'embedded' work. Contractors already work at the Air Station, and in support of Jindivik operation and maintenance at Jervis Bay.

Many will not know of the extensive engineering support we obtain already from manufacturers in Australia and overseas, and from overhaul contractors in Australia, under contract. We pass defect investigation requests to industry for analysis, and are supported as well in this by the Aeronautical Research Laboratories, the Material Research Laboratories and the Materials Testing Laboratories; and Garden Island Dockyard provides assistance from time to time. We rely on industry for many modification proposals and repair scheme designs. As well, industry supports our publications system and provides extensive maintenance support.

Much of the task which is now handled in DNAE and SAMR is in the selection of work to be

done, including maintenance and modifications, and equipments to be bought; and is concerned with control of both our own maintenance activities and those of contractors. By the nature of much of this work, it is unsuited to contracting out.

RELATIONSHIP WITH OTHER NAVIES

We aim to avoid reinventing the wheel by staying in close touch with major operators overseas, notably the RN and USN and have the good fortune to share a particularly close relationship still with the RN. Information flows each way and that aimed to prevent repetition of accidents and trials is vital.

THE FUTURE

This article is written in early April and our immediate future is concerned with the arrangements for Seahawk support and with thoroughly evaluating the performance of the aircraft and its systems before it is introduced into service. The Navy has introduced the concept of a Ship Acceptance Board to evaluate the *Success* before she is released to Fleet use and it is probable a similar concept will be applied to the Seahawk. A unit dedicated just to the evaluation task will be set up at NAS Nowra similar to the RN concept of an Intensive Flight Trials Unit and having features of the USN Technical Evaluation and Operational Evaluation. Bear in mind that while the aircraft is tested against contractual requirements before acceptance from the manufacturer, more extensive evaluation in our environment is needed to establish fully its operating capacities, and to determine any corrective steps needed to allow it to meet fully the operational requirements it was bought for.

We will continue to look at improving our organisation. The increased concentration of maintenance work at NAS Nowra will reopen the question of where our engineering and supply support staffs should be centred. The need for an integrated aircraft support structure akin to recent RAAF development at the Heaquarters Support Command may come up again.

In the longer term, the increase in FFG numbers may see more FFGs positioned in the West and we may need to look for a disembarkation site there. But this development and any movements of Sydney Fleet activities to Jervis Bay will not create big differences for us.

On the ship side we will need to convert *Success* away from the Wessex in preparation for the time when that aircraft pays off. With the Seahawk deployments increasing and if a means is found for placing operational helicopters at sea in even greater numbers, we will have to think about whether we need an aircraft intermediate level maintenance capability afloat, as we had previously and as is common to other navies.

On the personnel side we shall need to improve training and skill-retention to reduce the waste which comes from the misdiagnosis of aircraft faults and we shall need to foster or obtain the requisite Service and civilian skills needed for air engineering support. In part this means finding a way of inculcating naval background and experience to our Servicemen in the new conditions created by the paying off of *Melbourne* and the sharp reduction in the range and quantity of air engineering billets at sea which resulted; and of obtaining the indepth engineering skills and experience with industry we need from our civilians, both public service and contractor.

In the training and employment area we may need to be clearer on the differences in the terms 'maintenance', 'maintenance control' and 'engineering' (which includes maintenance engineering.) Many sailors and limited duties and special duties officers are highly experienced in maintenance and maintenance control but do not have engineering training to any depth. Qualified engineer officers are utilised on the other hand in maintenance control duties, which provides them with experience so that they can join their civilian counterparts of different backgrounds and use their full engineering skills later. We need to think of added training for sailors and officers with a maintenance background who are to take up staff positions and especially those with air engineering policy content.

In the case of civilian technical officers we should find better ways of using our ex-Service talent, albeit this is largely centred around Nowra. For civilian engineers we will need to rely on at least some who have gained their experience in major aircraft development projects overseas. We need this expertise and it is unlikely to be available from Australian sources.

An objective is that of increasing usage of our aircraft by improved organisation and improvements in our support skills. To meet this we might need to have some fundamental reappraisals of the Navy structure in which we operate. We should start forward on the premise that no more resources are required for this increased usage, just a better balance of resources and use of them. Certainly the Fleet could do with increased flying hours and there should be less contraints placed on planners in their perceptions of what is possible.

A final aim we have is to establish better what our aircraft systems are capable of quantitatively and in various conditions, and to monitor more closely whether the systems are giving all the performance they are capable of in service.

CAREERS AT THE CROSSROADS

By Captain A.H.R. Brecht RAN

'I am becoming more and more of the opinion that the introduction of the Warrant Officer rank in its present form was a mistake. Chiefs resent the downgrading of their position, junior officers mistrust the WOs, and senior officers never seem sure what to do about them.'

RAN Warrant Officer, 1983

This article has its genesis in the opinion quoted above, and in the views of a USN Chief Warrant Officer who bemoaned the same sentiments about his Navy, published in the Proceedings of the USNI[1] It attempts to examine the validity of such discouraging thoughts, taking into account the many staff studies carried out by the Naval Personnel Division since the Warrant Officer (WO) rank was introduced in December 1971. In so doing I have drawn upon a very wide cross section of available data, not the least being an extensive private survey of RAN WOs which I conducted over 20 months.[2]

Although the interpretations of the data are my own it is fair to attribute much of the content to RAN WOs themselves. The sample of WO surveyed is valid, being spread in time, anonymous, and sufficiently large to be properly representative. It was blind to category, sex, and seniority, and provided opportunity for written free expression as well as the more closely structured survey pro-forma. I also talked extensively with WOs over a two year period, and recorded their views.

My research was conducted before the December 1985 announcement by CNS that an avenue is to be provided for direct promotion of selected WO to Lieutenant, on the (new) SD Limited Duties List (SDLD). Judging by many of the views given to me during the survey this news will be most welcome and will alleviate some of the concerns expressed by the data. The article comments upon this initiative in the light of its possible impact upon the WO corps.

Introduction of the WO Rank

The decision to create the WO rank came after lengthy study which began in 1962 when the RAN Rating Structure and Advancement Committee (RATSTRUC) looked at the idea of an RAN Master Chief. Opinion against the move outweighed those in favour largely because it was held that such sailors could only be employed in large ships or establishments and their duties could be at the expense of junior officers training. Additionally, many felt that the status of CPO might be reduced.

Introduction of the Group Pay Scheme in 1968 gave the next impetus when the pay of selected senior Chief Petty Officers was aligned with that for WO 1st class in the Army and WO in the RAAF. This followed the view, accepted by Treasury and the Government, that the senior sailor of the RAN should hold the equivalent rank and status, as well as pay, as the senior NCO in the other Services.

The SAILSTRUC 70 Committee saw justification for a sailor rank beyond CPO, considering that the disadvantages identified by RATSTRUC in 1962 could be overcome by prudent management and administration. This was supported widely within the higher levels of

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the RAN and a recommendation was made to the Naval Board in 1971 that a rank be created, superior to Chief Petty Officer, and with the formal title of 'Warrant Officer'. The WO duties and responsibilities were to be over and above those given to CPOs and to be chiefly within their own category specialisations. It was recognised however that the WO should also be required to undertake duties outside his[3] category in areas of administration and leadership.

This move coincided with similar staff investigation in the Royal Navy which led to its decision, announced in 1970, to introduce the Fleet Chief Petty Officer. The reasons for the new rank accorded very much to those put forward by the RAN SAILSTRUC committee but whether either group was influenced by the other is a matter for conjecture. Next to change was the RNZN which approved the WO rank in February 1971.

The WO rank was formally introduced by the RAN in December 1971 with guidelines for duties, promotion, and conditions of service promulgated widely throughout the Navy.[4] Put into perspective, the WO was then seen as a mature, competent, and above average sailor whose specialist experience fitted him admirably to work in the areas of administration and training within his own category. Divisional Officer duties were regarded to be part of his responsibilities. Under the WO: CPO ratio envisaged at the time the initial WO corps comprised about 80 sailors. Sea service was not excluded.

The Warrant Officer Today

There are 224 WOs in the RAN today, coming from almost all categories, and filling a wide variety of billets. The 1986 WO is most likely to be male, aged 30–40 years, with less than five years seniority but with more than 15 years service. About 50% will in fact have reached pensionable age. The RAN possibly depends upon WOs more than it realises but the research for this article indicates that as a corps, RAN WOs are uncertain of their present place in naval society and many wonder where their future lies. Generally speaking WO are highly experienced professionals; well motivated and dedicated; proven leaders and technical experts in their respective fields; and extremely proud of their achievements in reaching the top of the sailor structure. Their potential as a resource is self evident but two questions spring to mind, namely:

- is the RAN getting value for money from its presently constituted WO corps; and
- equally important, do their current conditions of structure and employment allow WOs the freedom to experience career fulfillment and job satisfaction?

An affirmative answer to the second question should automatically ensure a positive response to the first; unfortunately many WO seem to be less than happy with their lot. The next part of this article looks at the opinions of those who participated in the survey and makes some observations upon possible implications for the RAN.

Structure and Conditions

The elevation of Chief Petty Officers to Wardroom status (as in the USN WO Scheme) was never part of the RAN intentions for its senior sailors. Of those surveyed, 63% of RAN WO felt that no disadvantage accrued from this decision and only 42% believed that a commission should come with the promotion. Neither Army nor RAAF WO have commissions and in today's egalitarian military society it would probably be hard to argue that Navy should do so alone. The relatively even handed percentages indicate that the WOs have no strong feelings either way on the subject, and on balance the status quo is worth preserving.

In his USNI article Chief Warrant Officer Hart observes as follows:

> 'Neither officer nor enlisted, a Warrant is somewhere in between: a limbo with all of the frustrations of a junior officer and none of the benefits of a master Chief.'[5]

This would indicate that Wardroom life and status by itself does not resolve the dilemma felt by WOs about their role at the peak of the lower deck tree. In this respect future SDLD officers may need to be carefully nurtured in their early Wardroom days when the sudden accompanying changes to their previously familiar lifestyle after promotion will bring added pressures.

Navy WOs generally see no disadvantage in not living in a Wardroom mess but there is a degree of ambivalence in this because a slight majority (54%) regards messing with CPO as downgrading. Similar messing arrangments apply in Army and Air Force without problems, and have done so for many years, so there seems little real justification for Navy not to continue its present practice. This does tend to reinforce the precept that WOs are NCOs and not officers; thus Navy must be careful that sufficient delineation between WO and CPO is preserved.

Although WO have no burning desire to be regarded as officers the study clearly showed a sense of frustration with respect to status. 42% responded that they were not treated with proper respect by officers yet over 85% claimed to notice no slippage of standards in their treatment by juniors who seem to recognise and respect the WO, fully. The reported response of officers

is disappointing but the author suspects that if such behaviour is true than a large proportion of the allegedly offending 68% might be junior officers; in the hypothetical case where a young officer is striving to establish his *own* position in the workplace a situation could easily arise where he would not wish to be seen as less effective than, or subsidiary to, an experienced specialist WO.

The survey did not directly refer to this issue in its questionnaire and thus cannot provide definite evidence to support the above theory but it is relevant that three quarters of the WO reported that they are actively consulted and are involved in the planning of departmental activities. Also, 60% of commanding officers seek out their WOs at least once per week for discussion or consultation. These figures suggest that at the senior Lieutenant, Lieutenant Commander and Commander levels where officers occupy positions of command or head of department, the RAN WO is accorded the respect he deserves.

Nevertheless, the matter of status is very important to today's WO who is constantly being asked to fill important billets ashore in staff postings at Navy Office or in Command headquarters elsewhere. More than half see themselves as having a unique or special position in the RAN with much to offer through skill and experience yet their sympathy with the 'betwixt or between' aspect of Mr Hart's quoted comment above is obvious.

One interesting comment was made which might be worthy of official consideration:

> 'I personally do not hold with the belief that the Warrant Officer should be classified as a "Senior Sailor." I believe the terminology should be "Officers, Warrant Officers, Senior Sailors, and Junior Sailors."[6]

Sea Service

Today's WO has the sea in his blood no less than any of his maritime fellows, regardless of rank or category. Only five of the WO questioned did not wish for more sea service and almost all saw it as an important part of a WO's role. Opinion was divided as to who should step aside, junior officers or CPO, and the only real agreement was that somebody should. These sentiments might be fine for a Navy with unlimited sea billets and many ships, but given the present circumstances the WOs claim is unrealistic. Manpower pressures in the wake of the government decision to dispense with an aircraft carrier and fixed wing naval aviation have curtailed almost all of the opportunities for WOs at sea. Reduction of sea service may be a bitter pill to swallow but it has to be recognised as a consequence of higher promotion. For the most part, WOs must accept that in the majority of cases they are 'out of bracket — high' and leave it at that. The smallness of the RAN has imposed similar restrictions upon officers for years and the paucity of sea billets for senior people remains a fact of modern Navy life.

Promotion and Re-engagement

The clearest point which emerged from the survey is that RAN WOs feel very strongly that their existing re-engagement conditions are unfair. The rules for all sailors provide that re-engagement is necessarily dictated by the manpower requirements of the Navy and the conduct, job performance, and medical fitness of the individual. For WOs, the policy states:

> 'Warrant Officers will normally be re-engaged to complete 20 years pensionable service or to a date to serve five years in the rank of Warrant Officer, whichever is the later.'[7]

Applications for re-engagement beyond the periods stated are considered on their merits but outstanding performance, the promotion prospects of other sailors of the Branch, and the requirements of the Service are also taken into account.

These conditions appear fair and reasonable but a number of inequities arise on closer examination. For example, a person's on-promotion date can become crucial to his re-engagement equation because a CPO promoted to WO after 19½ years service has an almost guaranteed career to 24½ years (five years in the rank) whereas a sailor promoted after 15 years service is safe only to 20 years (pensionable service). WOs have some very strong opinions about this:

> 'We are guaranteed five years in the rank only, thus undermining our job security. Once promoted to Warrant Officer we are on the way out.'

> 'After devoting my working life to the Navy I am not prepared to take the chance of having my request for re-engagement refused. ..... being told at age 40 that they don't want you anymore is completely unacceptable.'

> 'I am penalised for being promoted at 14½ years service.'

Throughout the data on this questions Navy WOs repeatedly draw attention to the disparity between the Services' rules for re-engangement. Army and Air Force WO are permitted to re-engage to reach a retiring age of 55 years which guarantees them a secure career on promotion to the rank. While the needs of Navy may be different to the other Services with respect to these most senior sailors it is difficult to explain away this seeming imbalance, at face value. Creation of the WO rank in the RAN drew in part

upon the need for commonality with Army and RAAF and its appears illogical to then move away from this premise when setting conditions of service. 96% of those WO questioned in the survey would certainly endorse this view.

Introduction of the SDLD officer scheme may serve to lessen some of the unhappiness which exists about the re-engagement particularly because it enhances career prospects and recognises that WOs are highly skilled and specialised sailors. Many WOs advocated such promotion when consulted during the survey and the decision should have widespread appeal and acceptance. Interestingly, most comments referred to similar Army and RAAF schemes, extolling their virtues, but demonstrating at the same time how much RAN WO see themselves as part of the senior NCO structure of the Australian Defence Force; and how much they feel behind their Army and RAAF contemporaries in conditions of service. Dissatisfaction with WO re-engagement rules may not necessarily be dispelled by the SDLD initiative, even though it does provide the much sought after avenue to service until retirement.

The palliative effects of the SDLD scheme upon the uncertanties felt by some WOs with respect to their working lives in the Navy may take time to become known but they will make interesting study. WOs who draw back from a conventional SD venture might see the SDLD avenue as much more attractive and hence seek promotion as a means of extending their naval careers. Employment as a Lieutenant SDLD would be in a familiar field with one's expertise recognised in a way that sometimes does not apply to the normal SD officer, and this aspect might appeal to mid-seniority WO who otherwise could anticipate retirement due to re-engagement criteria. However, promotions to the SDLD list are expected to be limited, at least in the early stages, so the full impact upon the WO corps will not become apparent for a year or two.

In a wry twist, the need to be carefully selective in SDLD promotions (only the best WO will qualify) will see the adoption of a reporting and selection system which many WOs see as necessary for the WO rank itself. While the majority regard the existing PPIA system to be satisfactory much criticism is levelled at what may be termed 'the inevitability of promotion.' Over-marking is the most comon complaint against the PP1A system throughout the RAN generally, and few would disagree that as sailor rank increases so too do PP1A scores. Promotion from inflated reports degrades the quality of promotees (over a long period) and when viewed in the context of selecting CPO for WO it raises the potential for error.[8]

The principle of a WO Selection Board seems to have fairly broad acceptance amongst present WO. In consensus, opinion is that promotion from CPO to WO is too easy and that 'sitting back and waiting your turn' is too often the case instead of selecting only the best. Evidence that this theory might be valid can be read into the fact that he who is top of the roster is almost invariably promoted. Because no return of service obligation (ROSO) exists for promotion to WO* the premature retirement or resignation of a promotee results, in most cases, in the subsequent automatic promotion of the next in line. This truly seems the way to dilution of quality.

The Selection Board concept might be worth considering. One possible procedure is to choose a number of candidates annually from their PPIA scores, interview them individually, and promote only those deemed suitable. Chosen candidates could be advised of their selection but actually promoted only as vacancies occur. Such a process would add to the administrative burden, which is a disadvantage, but could enhance the WO image and status and increase the differentiation between CPO and WO which seems slight at present. It could also be used to identify future candidates for SDLD promotion, thereby increasing the success of that scheme.

Employment

Collected data reveals that WO are less perburbed about their employment than their conditions of service. This would indicate that the billets and duties available to them are about right and most would have job satisfaction. The survey showed this to be generally the case but a number of factors need also to be recognised. On promotion to WO a senior sailor is mostly married, with children, and is seeking some form of domestic stability. He is therefore more likely to accept a billet which is less than he would ideally want, than he would do were he unmarried or without ties. Almost 70% claimed to have full job satisfaction even enough some WO are employed out of branch or in duties for which they have not been trained, such as staffwork billets at Canberra.

WO duties closely follow the guidelines set out in 1971 and these experienced senior sailors serve as Divisional Officers (65%), administrative managers (65%), professional advisers (almost 100%), RPOs and Branch experts. There is an evident reluctance to accept duties which are seen to be more suited to junior officers, or officers under training (such as gangway OOD in harbour) yet 83% of WO surveyed believed that sharing the miscellaneous duties load (Sports Officer, Mail Officer, Library Officer etc) is fair and reasonable. The Navy could perhaps do more to prepare WOs for these roles since many were

critical of management course provided.

The flexibility of the WO corps is clearly shown by the data. In many cases these sailors are employed in demanding administrative staff billets, particularly at Navy Office, yet they almost unanimously support such employment, and 85% advocate that duties should not restrict them to their own category. At the same time the Navy seems guilty of placing some WOs into billets which might more suitably be at CPO level thereby creating problems which again raise the status issue:

> 'My particular billet gives me immense job satisfaction; however there are probably less than 10% of WO billets which carry the same satisfaction. This is a direct result of the indecision of exactly who we are, officer or sailor.'

> 'The great majority of WO generally express dissatisfaction with their jobs because they lack any challenge and provide no avenue to fully utilise skills.'

> 'My present job could be performed by a leading seaman/junior PO.'

These above views are supported to an extent by the burgeoning of WO billets in recent years. From about 80 positions at the beginning the number has risen to its present 218 which must surely distort the rank pyramid and raise questions whether all WO billets really require that rank level. The author believes that while this may be true in some cases there is little evidence to show that mis-employment is widespread. The axiom 'talk is cheap' might be seen to apply here because although the quoted views may be genuinely held they are not decisively supported by the data. An opposing view is thus equally valid:

> 'I am very happy with my employment.... I have the respect of my superiors and I can see the value I am getting for my efforts.'

In the final analysis job satisfaction is a personal matter, one either has it or not. Almost three quarters of WO surveyed claim that their present employment is more demanding than in their last CPO billet yet about the same number said that their ability is not taxed. These dichotomies suggest that while most Warrant Officers are in appropriate billets their superiors could demand more from them, perhaps by allocating added responsiblity.

Retirement

Notwithstanding its previous questions about re-engagement for WOs the survey probed the matter of retirement, asking whether this would be influenced by DFRDB entitlements. Not surprisingly, it would; however, of more interest is the response that the primary factor in 92.5% of cases would be loss of job satisfaction. According to the evidence provided, WOs firmly believe this to be more important than monetary gain for those who wish for a full Navy career through to retiring age. Since almost all supported the retiring age concept it is clear that the RAN could depend upon loyal and dedicated service as long as careers remain worthwhile and fulfilling.

Conclusions

After many hours of pouring over the data and of testing deduced theories against known examples of fact the author has come to the view that bringing the strands of evidence together is very necessarily a subjective exercise. The data itself are objective but as in all matter concerning people the laws of statistics must be approached with care. Nevertheless, some conclusions can clearly be drawn.

To begin with, although not all RAN WOs expressed opinions the data are sound and the trends reflected can be taken as truly representative. Their enthusiasm for the Navy shines through and while some are dissatisfied the great majority are proud to be WOs in 1986. They see the Navy as a career and approach decisions about it with their long term (personal) futures in mind. There is no doubting the loyalty of the corps, nor its skills and expertise, nor the potential it has to be of great service to the management and administration of the Navy. One might even say that the more one asks of RAN WOs, the more they will deliver.

All is not necessarily rosy. Some inequities are apparent in conditions of service and the Navy could well benefit from a close examination into the rules for WO re-engagement which at present create a festering sore of resentment. This is particularly exacerbated by the conditions experienced by their Army and Air Force fellows: almost to a man the navy WO thinks his rules to be unfair.

The relatively large number of WOs serving today compared to originally planned ratios suggests that the overall quality could be endangered by promotion which is insufficiently selective. The RAN might consider tightening its promotion criteria in order to obtain only the very best CPO as WOs, thereby improving the prospects for superior performance at the higher rank in the process. Additionally, while job satisfaction should not become the focus of WO employment criteria there is little doubt that some WOs are under-employed or are in unsuitable billets. Since loss of job satisfaction is a major cause of decisions for discharge or retirement the RAN might well look at all WO billets to see if they really meet the employment criteria upon which the rank was created. Tied together with this is the important matter of status.

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Throughout all of the research and opinion involved in preparation for this article the constant theme of status has been apparent. Although the WO rank exists as an integral part of the sailor structure, the Navy seems as often unsure of their status as do WOs themselves. This gives rise to uncertainties about employment and careers and is the cause of much frustration. WOs are increasingly employed in billets where officers are complemented (either through shortages of officers or rank imbalances in the officer corps, or both) and indications are that they perform these duties loyally and well. Such men logically expect that they will be treated as officers in the workplace while carrying out these responsibilities and that their performance will favourably affect their prospects for a continued career. Unfortunately, the evidence suggest this is not always the case.

The WOs themselves do not wish to become officers (those who do, have avenues through the SD and SDLD schemes) but they do want to be recognised for what they are: senior sailor experts with much to offer the RAN in terms of specialist skills, experience, and contact with junior sailors. Because their rank is higher than that of CPO the Navy at large should acknowledge this by giving respect where it is due and avoiding any unintentional downgrading of WO status.

The Navy cannot solve problems of a shortfall in any rank level simply by moving in people of a lower rank and paying appropriate monetary allowances. WOs appear to have been caught in this situation however, and the results have potential for undesirable frustration and uncertainty. That this is not a difficulty particular to Australia is shown by Chief Warrant Officer Hart who identifies in the US Navy where WOs find themselves neither officers or sailors.[10] Resolution of the question of staus with all of its subsidiary implications seems therefore to be a matter of importance for the RAN, one which is deserving of some priority. The author is sure that many frustrations among RAN WOs would be alleviated in this way, leaving them with a much clearer picture of their place in the Navy and of the careers they can expect.

At the end, one is left with the two questions posed earlier: does the RAN get value for money and do WOs enjoy the conditions of service and employment they deserve? On balance the outcome is a positive one, for as previously stated the WO corps by and large provides the goods. Everything can be improved however, thus the matters suggested as worthy of examination officially are those which tend at present to hold back the contribution which the WOs make; they are not in themselves an indication of widespread unease of discontent, far from it: the WO corps presents as a body of men and women of whom the RAN can be proud. Seen 15 years later, the 1971 decision to create the WO rank can be judged to have been valid and although some aspects of the structure most certainly deserve attention now there should be little doubt that RAN WOs are alive and well. Value for money seems assured.

Notes and Acknowledgements

1. Hart JB. Chief Warrant Officer USN, *Warrant Officers: Use Them or Lose Them*, USNI Proceedings, April 1982.
2. The survey approached almost half of the WOs in the RAN. They were requested to answer pro-forma questions on WO structure, conditions of service, and employment. Two samples were taken, one in 1983 and another in 1985. The results of the survey form the basis of this article but have also been passed to the Chief of Naval Personnel for action as appropriate within that Division.
3. For the purposes of simplicity the masculine gender is used throughout. It should be taken to include the feminine, since WO rank is not restricted to males.
4. DI(N) PERS 43–4
5. Hart, op cit
6. An important criteria of the survey was the guarantee of anonymity for participants. Accordingly no quotations are sourced.
7. DI(N) PERS 43–7
8. The author does not contend that the PPIA reporting system is wrong but rather that it is open to abuse unless the guidelines for compilation of reports are followed very closely. Many will argue this does not always happen now.
9. Advice has been given that Navy would like to impose a ROSO but tri-Service agreement to the concept cannot be reached.
10. Hart, op cit.

RESEARCH GRANTS SCHEME OF THE AUSTRALIAN WAR MEMORIAL

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The Australian Naval Institute is keen to foster research into Australian military history, especially in the Naval context. Since 1976 over $240,000 has been awarded by the Australian War Memorial in grants and scholarships to 91 research projects of which only three could be considered as being related to the RAN. The ANI Council would be pleased to offer advice on suitable Naval topics to any members who are considering applying for an award under the Research Grants Scheme.

The ANI currently has one of its members, Mr G.C. Calderwood researching information in the Australian War Memorial on a voluntary basis. The ANI Council would be interested to hear from any other members who would volunteer to assist in this research effort from the Australian War Memorial.

THE REGIONAL DEFENCE TREATY ITS CONTRIBUTION, RELEVANCE AND FUTURE

By Lieutenant A.J. Hinge, RAN

'Two are better than one, because they have a good reward for their labour. For if they fall, the one will lift up his fellow: but woe to him that is alone when he falleth, for he hath not another to help him.'
Ecclesiastes Ch. 4:9,10

Sentiments of unity expressed in the words above are generally taken to be as true today as when uttered three thousand years ago by wise old King Solomon, a monarch of no mean judgement in affairs of state. The advantages of a collective defence have certainly benefited weaker nations throughout history, but are they as relevant in the nuclear age where two radically different ideologies, democracy and communism, compete for influence and ascendancy? Australians like to think of themselves as being culturally, ideologically and historically associated with the Western Strategic Community, which purports to champion democracy and freedom. The most tangible expression of membership of the Western Alliance for Australians is the political and military linkage derived from the ANZUS Treaty, which is also Australia's major regional defence pact. However, this treaty was ratified well over thirty years ago in San Francisco during early September, 1951. The senior party to the treaty, the United States of America, had just emerged from World War 11 as the unchallenged economic, military and political leader of the Western World. But times have changed. American prestige is far less today and the will and ability of the United States to help its allies is frequently questioned, often ridiculed and sometimes doubted. Consequently, Australians, like their New Zealander cousins, must now seriously question the relevance of the ANZUS Pact to their unique geostrategic circumstances and, after carefully weighing costs and benefits, ask the question: Does the ANZUS Pact still contribute to the current interests of its signatories and does it have a meaningful future in Australia's defence?

The first issue to be considered in answering this question is that of the relevance, or lack of relevance, of the treaty objectives. If the original objective of the pact is no longer appropriate then it is difficult to imagine that the treaty can still be relevant. Sir Percy Spender, Chief Negotiator and Australian signatory to the pact, stated to the House of Representatives in 1950 that 'What we seek is an effective way of contributing to the fashioning and maintenance of world peace. What we desire is a permanent regional basis for collective security...'[1] This objective is reflected in the first paragraph of the ANZUS Treaty text which states that the purpose was '... to strengthen the fabric of peace in the Pacific area.'[2] This objective remains relevant and unquestioned. However, the unstated, but specific objective of the pact was a security *guarantee* from the United States in an increasingly dangerous world. To fully

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understand this and gain an insight into the *nature* or spirit of the treaty we must go back to the 50s and trace the pact through its formative years.

Contrary to popular belief, the decade of the 1950s was not a carefree era of post-war celebration where the prosperous citizens of the Western world gaily led their lives dressed in white sports coats, pink carnations and blue suede shoes! Beyond the pale of Bill Haley, Marilyn Monroe, Elvis Presley and Doris Day were the communist witch hunts of Senator McCarthy, together with strong Soviet challenges in nuclear weaponry and space technology. Australia's strategic situation in 1950–51 had little to recommend itself. Mainland China under Mao Tse Tung had recently fallen to communism and was threatening Taiwan. The new communist giant enjoyed close links with the USSR and had injected its forces directly into the rapidly escalating Korean War. Australia still feared Japan and was resolved 'to oppose a lenient peace settlement with Japan, except in the context of a guarantee of United States defence of Australian security in the event of a resurgence of Japanese militarism.'[3] Australia still bore deep scars of Asian aggression and with much justification felt itself an exposed European enclave in an Asian melting pot of strife and tension. Colonialism was being violently shattered worldwide. The French, British and Dutch in South East Asia would not long survive the growth of militant Asian nationalism. The Australian and New Zealand governments sought the ANZUS alliance out of a deep sense of insecurity and a policy of realistic self-interest.

Australia did not get all that it had counted on from the Pact. The Menzies Government wanted the alliance to go in the same direction as NATO in which different national units were assigned to a Joint Command. Australia wanted an overt, organised military alliance under a Joint ANZUS command. An American senior officer of Flag or General rank was even invited to be permanently posted at Australian Department of Defence Headquarters to 'look over our shoulders and take part in our military planning.'[4] In the mid-1950s, Lord Casey (then Mr Casey), the Australian Minister for External Affairs, approached Admiral Radford, Chairman of the US Joint Chiefs of Staff about the structure of a permanent ANZUS force. In recently declassified documents, Radford, who seemed irritated by Australian persistence, says ' I have had two conversations with Casey in the last month, both of which plainly indicated Australian continued desire for a direct tie-up between US and Australian Chiefs and their hope that as a result of SEATO military planning they will be told what military forces they are to contribute and where.' The United States did not want ANZUS to be a defence alliance on NATO lines and saw Australia's best contribution as bolstering British security interests in the region. In 1955, Radford told Casey that 'I could hold out no hope that planning could go so far as they (the Australians) desire. I pointed out that the US does not intend to make military commitments in connection with SEATO and ANZUS planning studies and consequently, would not ask Australia to do so.'[5] The ANZUS Treaty was thus a US concession to reluctant Australian endorsement to the 'lenient' peace treaty with Japan and was never meant, by the Americans, to be a substantial *guarantee* of US military involvement.

So, what in fact did Australia get from the ANZUS Treaty? Thanks to the politicians who presented the Pact as a security *guarantee,* most Australians were lulled into a false sense of security, not unlike that which persisted before the fall of Singapore in 1941 when confidence in the might and paternalism, of the British Empire allowed Australians to 'lotus-eat' unmolested, never dreaming that they would be soon facing catastrophe.[6] Prior to the Vietnam War and the enunciation of Nixon's Guam doctrine, Australians drew a disproportionate amount of comfort from the ANZUS Treaty. Towards the end of his long term as Prime Minister, Sir Robert Menzies went so far as to describe the ANZUS Treaty negotiation as the single greatest achievement of his government's tenure.[7] He called the Treaty the 'cornerstone' of Australia's defence; a cornerstone being an indispensable part or basis of the strength of an object. Sir Robert Menzies, like so many Australians, probably firmly believed this to be so and considered the seldom-read Treaty document to be an iron-clad, watertight, automatic guarantee of US security assistance under any circumstances. In examining the 'letter of the law', as expressed in the original treaty text, we find its reputation as a vehicle of unconditional support to be somewhat overrated. Vague phraseology, characteristic of such documents, seems to be the order of the day.

What this 'cornerstone' to Australian defence actually says is specified in Articles III and IV (paragraph 9) which state: 'The parties will consult together whenever in the opinion of any of them the territorial integrity, political independence or security of any of the parties is threatened in the Pacific... Each party recognises that an armed attack in the Pacific on any of the parties would be dangerous to its own peace and safety and declares that it would act to meet the common danger in accordance with its constitutional processes.'[8] Such terms as 'consult with' and 'act in accordance with its constitutional processes' are hardly the jargon of a watertight security guarantee. Obviously, with

respect to the *letter* of the Pact at least, it is certainly not a treaty to rely on for the underpinning of Australian national defence posture and policy.

Before working out the cost and benefit aspects of the ANZUS Treaty as it affects Australians now, one last aspect of the Pact's background must be weighed in order to have a more complete view of its nature. This aspect relates to how the treaty has stood up to 'strain' since its inception. While not tested, in terms of invocation of its Articles in time of tension or crisis, the *spirit* of the treaty has been called upon twice.[9] On both occasions, Australians have suspected, and in some cases questioned, its efficacy and have been disappointed at US response.

In 1963, the United States refused to support Australia's position against Indonesia's claim to sovereignty of Dutch Western New Guinea (WNG), now known as Irian Jaya. The Indonesian claim was that, as rightful heir to all former Netherlands Colonies in the archipelago, it could rule WNG despite the racial and historical distinction of the Melanesian WNG natives from the Indonesian population. Realizing from its World War II experience the strategic importance of New Guinea, Australia was firmly set against this claim and argued for the provision of the right of self-determination of WNG. New Zealand strongly supported Australia in its stand. Both partners reasonably considered a confrontational Indonesia controlling WNG to be a direct threat to Australian administered East (Papua) New Guinea and thus eventually to Australia itself.[10] The United States was consequently 'consulted' in the spirit of Article III to the Treaty but US *global* interests were not convergent with Australia's *regional* interests. The US believed that Indonesia might succumb to Soviet advances if support for the Australian stand was forthcoming.

Besides not wanting to lose Indonesia to communism, the US also had significant economic interests in the archipelago and did not want to offend Indonesian sensibilities. A US State Department brief at the time noted that relations with Australia, an ally in three major wars so far, '... were at least as important as our relations with Indonesia.'[11] United States relations with Australia were thus considered to be on par with the non-aligned, aggressive and undemocratic Indonesian government! So much for the ties of blood, heritage, language, constitutional practise and two-way loyalty! Australian interests were sacrificed to the bright, new, Kennedy administration's in-vogue concept of 'Flexible Response', at the political level.

The origins of this pragmatic US 'sell-out' of Melanesian self-determination and Australian interests emerged in early 1961 when Robert Komer, an aide to Walt Rostow (who was then newly appointed Deputy Assistant to the US President for National Security Affairs) told his boss that '... Indonesia's potential swing to pro-Soviet stance dictates cold Realpolitik ... So to gain time in Indonesia West Irian is the price.'[12] Rostow accepted this assessment and told Kennedy that 'We believe the status quo in WNG should not be maintained ...', which in more frank and precise terms meant that the US should acquiesce in the Indonesian annexation of WNG.[13] This intent was relayed to the US Ambassador in Djakarta who stated that 'We recognise clearly that any permanent solution must be one which is acceptable to the Indonesians.'[14] Later in that year, Robert Komer quipped, with the crass bravado typical of the 'bright' young White House aides who steered the US through the 60s, that: 'In the last analysis, while the Dutch and Aussies will be mad as hops: will they really cut off their noses to spite their faces? How long will their initial resentment last?'[15] The scene was thus set for the US-sanctioned annexation of WNG by Indonesia. The fruits of Realpolitik and pragmatism came in May, 1963, when the handover of WNG to Indonesia was completed with much help from US Ambassador Bunker who negotiated the terms.[16]

Australian reaction to this episode was one of muted disappointment. The Minister for External Affairs at the time, Sir Garfield Barwick, in a Minute to his department said that 'In practice, each of the parties to the ANZUS Treaty is going to decide to take action under the Treaty according to its own judgement of the situation that exists ...' A lesson was starting to be learned and within two years of WNG annexation it was to be reinforced.

US actions during the next occasion where provisions of the ANZUS Treaty could have been invoked was a great improvement on the previous case. On this second occasion, US support had now reached the stage of being equivocal! This episode occurred in 1965 during Indonesia's adventuristic confrontation of Malaysia. Australia and New Zealand backed Malaysia by sending combat troops to Borneo in 1965, the same year ANZACS started arriving in South Vietnam to support the US. American comments on the treaty interpretation in this situation were that the United States was 'conscious of the obligations that might arise under the ANZUS Treaty, but was reluctant to provide an unqualified affirmation of support ... (it being) preferred to leave the point at which the Treaty might be invoked to be decided by events and the nature of any particular situation.'[18]

In all fairness to the US, on neither occasion was it called upon to militarily back Australia but both episodes are sobering and remain

indicative of the pragmatism which the US, like most other nations, will employ as it looks though its perceived political prism of realistic self-interst. Australians must not look upon the ANZUS Treaty too naively. In the 1960s, the lesson was learnt that US reaction to Australian problems has not and may not be automatically in our favour. In fact, as we have seen, US actions could be contrary to Australian interests. The Guam Doctrine of 1968 rounded off the lesson with an irresolute US, fingers badly burnt in Vietnam, saying to the world exactly what the Roman Emperor Honorius said when withdrawing his legions from Britain in the 5th century ... 'Look to your own defence.'[19]

US lack of support to Australia in the 1960s on the two occasions discussed was not vindictive or even based on false motives. Both episodes illustrate the *asymmetry* of the US-Australian relationship and its consequences. The US has much larger and diverse economic, political and military interests than Australia and New Zealand. The US has a *global* perspective and largely dictates global strategic circumstances in competition with the USSR. Australia, barely a middle ranking power, has more local or *regional* interests and perspectives. Convergence of interests of both large and small power parties to the Alliance will occur sometimes while divergence will occur on other, hopefully, less crucial occasions. Australians must always be aware of the fundamental and marked asymmetry of the ANZUS power balance and remember that both parties may have different perceptions of the Alliance, its significance and its obligations. Consequently, if this situation applies, then the possibility of similar assessment of a situation and an appropriate response is unlikely. The test of Australian diplomacy is, and must remain, the measure to which US interests can be, or seem to be, brought into convergence with Australian interests. US co-operation will be in direct proportion to its convergence of interest with Australia during a crisis. By convincing the US that there is more convergence of interest with Australia than was originally thought to be the case, artful Australian statesmen can evoke more co-operation from 'great and powerful friends' than could have been the case. If this sounds somewhat pragmatic in itself, let Australians always remember and be sobered by the words of McGeorge Bundy who, when Special Assistant to the President for National Security Affairs frankly stated America's position on overseas involvement when saying that 'The

USS Buchanan, refused entry into New Zealand ports. *Photo courtesy Command Photographic Centre*

American commitment anywhere is only as deep as the continued conviction of Americans that their own interest requires it.'[20]

Having presented the ANZUS Pact as a rather less-than-sturdy foundation on which to base Australian defence posture, the stage is now set for a dispassionate weighing of the 'pros and cons' of the arrangement. In keeping with the somewhat harsh analysis thus far we will look at the 'cons' first and follow them up with the 'pros' in the time-honoured tradition of keeping the best news till last!

Many Australians, particularly after the US withdrawal from Vietnam in 1975, have grown uncomfortable with the Alliance and have expressed displeasure with its apparent vagories, dismissing it as a flimsy piece of political rhetoric of little or no meaning. Some have argued for armed neutrality and dissociation from the Alliance: 'Consider how crassly absurd it is that this nation, with everything it grows and makes, sea girt and far from the main centres of strife and dispute, should be gambling its peace on what may happen between Russia and America, which have no ears to listen to us.'[21] There is some merit to this view as the connection with the US had led Australian defence planners to develop some unhealthy and potentially fatal, in a national sense, habits. Previous reliance on the illusory *promise* of almost certain US security support has tended to distort defence planning by nurturing a belief in being able to get away with 'defence on the cheap'. Very little need has hitherto been felt by Australian planners to closely match force structure to the unique geo-strategic circumstances of our continent's position. This is a complex task which has been persistently shelved in opting for state of the art 'core-forces' which are wholly interoperable with US military platforms. In taking this line, force planners could avoid primary accountability for Australia's own security and neglect the burdensome and necessarily detailed need for national mobilization planning. Australia ranks very low amongst developed nations in terms of percentage of Gross National Product spent on defence. This figure was only 2.8% in 1984–85

USS Reid, one of the Oliver Hazard Petty class identified by the NZ Government as not nuclear capable and so welcome to visit NZ ports. *Photo courtesy Command Photographic Centre*

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with no likelihood of significant real increase.[22] This poverty of investment is manifested in an inability to deploy anything like a fully equipped infantry division for combat purposes. In fact, recent reports indicate Australia would be very hard pressed to deploy an infantry brigade with any degree of sustainable firepower within many weeks of notice.[23]

This situation suggests that perhaps Australia is engaging in a distorted and all-too-conventional defence posture which may be too rich for its economic blood. Australian military preoccupation with fielding 'state of the art' equipment in conventional sea, land and air operations may largely be traditionally derived from a perceived requirement for operations with equally sophisticated US forces relatively far from our waters.[24] Such a concept of operations may be counter-productive in view of the current emphasis placed on Australian self-reliance in defence. Instead of fewer state of the art units it has been argued that more 'good enough' units incorporating 'appropriate' technology with less capability, range and compatibility may be more relevant to our geostrategic situation.

The questions of sovereignty and foreign policy flexibility also arise as bones of contention in any examination of ANZUS costs to Australia. Our country hosts a significant number of US facilities which are of considerable value to the US military capability in general and the US nuclear deterrent in particular. Certain infringements of Australian sovereignty have been alleged to have taken place since, on a number of occasions, the Australian government has not been fully briefed on US military support activities relayed or directed through Australia.[25]

During the Vietnam War, for instance, North West Cape Transmitters were used for the support of US mining against North Vietnam in 1972. In 1973, it was alleged that US ground-station-controlled satellites were used to target for US bombers over Cambodia. Accusations were also made concerning the relay of Yom Kippur war intelligence through these stations to Israel.[26] The relative merits of these happenings and alleged happenings is immaterial to the sovereignty issue. The Australian government has a right to know what is happening on its soil as embarrassments do occur. This was found to be the case in the mid-70s when Australian foreign policy independence was undoubtedly compromised by the strong connection between Australia and the US as perceived by some other regional states. Australia acted as a strong advocate of the concept of an Indian Ocean Zone of Peace at this time. However, Australia was seen as quite hypocritical by other regional states, especially India, as it was hosting US ground stations that they suspected were spying on their internal affairs and co-ordinating offensive (bombing/mining) operations in the region.[27] Similar criticisms were made of Australian sincerity at the August, 1985 South Pacific Forum Meeting by several South Pacific states while debate was conducted prior to endorsement of the South Pacific Nuclear Free Zone Proposal.[28] How, it was argued, was Australia's support for the Zone compatible with Australia continuing to host US facilities which form an important part of the US Strategic Array? Even closer to home the strains on the Treaty have led to certain foreign policy constraints with long time friend New Zealand over the ship visits issue. Consequently, the US–Australia connection is not a bed of roses for an Australia aspiring to show an increased interest in regional co-operation and being seen as less of an occidental island in an oriental sea.

The fact that at least one of the US ground stations, and possibly all three, are nuclear targets is also a factor to be taken into the cost side of the ANZUS 'balance sheet'. Many viewpoints exist as to the likelihood of these installations being nuclear targets but nothing in such matters is certain. In the absence of any concrete indications and immediate access to the Soviet Strategic Target List, we must surely accept the relevant finding of the Cross Report which says: 'It would be prudent for Australian Defence Planners to assume that the joint facilities at North West Cape, Pine Gap or Nurrungar are on the Soviet Target List and might be attacked in the course of a nuclear conflict between the two superpowers.'[29] Be this as it may, the Australian judgement has been that the advantages, in terms of contributing to nuclear deterrence, offered by these ground stations outweigh the risks involved by the presence on Australian soil. As the 1983 Australian Strategic Basis Paper indicates, 'In a nuclear world war Australia would be relatively unharmed. US bases in Australia would be nuclear targets. The benefits of having these bases located on Australian soil are considered to outweigh the potential costs involved.'[30] These bases also constitute valuable 'bargaining chips' with the US and are a tangible commitment of Australian resolve to support the Western alliance. The history and currency of Australia's hosting of these bases, together with B–52 overflights and support facilities for US warships will be an important consideration when, in a crisis affecting Australia, the US Congress asks itself, as one US President put it: 'What have they done for me lately?'[31]

It has now been established that ANZUS 'costs'. Australia is paying a definite and significant price for the Alliance in terms of political flexibility, foreign policy independence, sovereignty and military preparedness. The time has come to review the advantages deriving

from the ANZUS connection and determine how the benefits of the relationship weigh against the disadvantages described.

In 1982, the *Joint* Committee on Foreign Affairs and Defence, after a major ANZUS review entitled 'The ANZUS Alliance: Australian — United States Relationships', tabled a Parliamentary Paper solidly endorsing Australia's continued participation in the Alliance as a result of the many important advantages it was still seen to offer.[32] This bipartisan paper concluded that, besides giving Australia a recognised place in the Western Strategic Community, ANZUS was seen to *enhance* Australia's military and political influence within the region.[33] This conclusion was reinforced in July, 1985, when the Australian Minister for Defence emphasised that many nations in the South East Asian and South Pacific regions had a strong vested interest in the continuance of ANZUS despite the fact that they are not parties to it. He argued the case that the Pact was 'highly symbolic' for other regional defence policy makers and had become 'indirect support for their security'.[34] It was suggested that press comments in Malay, Indonesian, Thai, Japanese and even Chinese publications had expressed concern over the future of ANZUS since 'The Western strategic dominance in their region meets their fundamental need for a secure and stable environment in which they can pursue their economic development'[35]. This remark was supported by an earlier comment made by the Singapore Foreign Minister who suggested that any weakening of the security setup between Australia, New Zealand and the US would concern Singapore.

Linked with the enhancement of regional prestige deriving in many ways from the ANZUS alliance, the Joint Committee also concluded that Australia's level of threat deterrence was substantially increased. The possibility of direct US involvement in a crisis involving Australia is a critical 'Joker in the Pack' for any nation contemplating an attack on Australia or its interests. Deterrence is also tangibly reinforced by access to a very wide range of advanced defence resources as a result of the US connection. These resources include large amounts of otherwise unattainable intelligence data, the availability of state of the art weaponry and sensors as well as the highly beneficial effects of training exchanges coupled with frequent exercises. Such exercises involve quite large scale units which realistically portray maritime, amphibious/counteramphibious, land and air warfare operations. Features of these exercises could not be reproduced using Australian and New Zealand (ANZAC) resources alone. The primary advantage of involvement in these operations is practise for ANZAC forces in combatting large scale attacks and command/control of substantial forces in circumstances of higher mobilization. This is of enormous value in continental defence operations.[36]

Besides these extremely valued material and other practical benefits, the Alliance provides a valuable and proven 'entree' into US politics at a high level at favoured and valued ally status. Even in the trade area the Alliance has proved quite effective in gaining support for better access to US markets as it is in US interests to ensure that Australia and New Zealand both maintain robust economies which make them more able to fulfil their role in the alliance. It is obviously easier to get Australian messages 'across' to the US as a close ally. This is a vital asset to Australia.[37]

In 1983, following a Labor Party review of the ANZUS Alliance, the Australian Minister for Foreign Affairs endorsed the Joint Committee's Report and stated in Parliament that 'The Review has led to a firm and *unequivocal* reaffirmation of the Alliance as fundamental to Australia's national security and foreign defence policies'[38]. In describing ANZUS as 'fundamental', the Minister reflected the thoughts of an overwhelming majority of Australians that the ANZUS Treaty was *still* relevant and made a substantial, if not vital, contribution to the present and future Australian national welfare. Indeed, politicians cannot but be impressed and influenced in their judgements by the fact that even in times of stress between Australia and the US, popular support for the ANZUS Alliance has ranged between 70 and 90 percent[39]. This represents an unusually massive and consistent level of support. Consequently, strong statements in support of the unimpeded continuance of the Australia-US connection, and the ANZUS Alliance generally, have consistently come from the highest levels of Australian government whether occupied by liberal or labor incumbents[40]. Australians have thus concluded, unequivocally, that the benefits derived from the ANZUS Pact are tangible, valuable and far outweigh the costs of the commitment. Therefore, the Australian-US security connection, after recent meticulous and lengthy review, remains an invaluable prop in Australian defence.[41] Its great relevance and contribution to Australia is therefore open to little question and the 'ANZUS' link seems destined to remain as strong as ever. Also, it must be stressed at this point that the critical link in the ANZUS Alliance has been from the beginning, and will remain, the AUSUS link. As long as this link remains substantially intact, the essential *nature*, even if not the traditional acronym of the treaty, remains the same as ever.

The secondary ties of this trilateral alliance are the ANZAC (Australia-New Zealand) and the

USNZ (US-New Zealand) links. Each of these two linkages, like the AUSUS connection, can be and must be treated separately to ensure that the basic utility and nature of the Treaty is maintained in terms of contributing to Australia's regional security. The future of the USNZ connection was open to question throughout 1985. New Zealanders must be recognized as using their rights of sovereignty in the nuclear ship visits ban, and both other partners have a right to voice their opinions on the issue since it threatens the cohesion of the ANZUS Alliance. The US is justifiably upset with the ban. Assistant Secretary of State, Wolfowitz, said (Americans) would not long support commitments and alliances that protect others, if those others will not uphold their own responsibilities'[42]. The Secretary of State, Mr Shultz, elaborated on this point of view when he said '... as far as we are concerned, the ANZUS Treaty remains open and in any case New Zealand is a friend.' However, he goes on to say 'Ship visits are an essential part of the flow of military relationships, and you can't sort of pick and choose and decide what portion of the alliance capability you want and what position you don't want.'[43] The basic US 'gut' reaction to the New Zealand anti-nuclear stance was however best summed up in early 1985 by the then Commander of US forces in the Pacific, Admiral Crowe: 'It is difficult for me to understand how New Zealand feels the US can oblige its men and women to the defence of a country that does not welcome those men and women. I must confess, the whole thing is a little mind boggling, especially in the light of the Soviet buildup at Cam Ranh Bay ... It (the New Zealand action) has broken the unity of the west when it is entering negotiations with the Soviets.'[44] This attitude is one which many Australians can and have identified with and is one which the Admiral has taken with him to his posting of significant influence as Chairman of the US Joint Chiefs of Staff.

Australia, as the effective architect of ANZUS, is justifiably concerned at this rift in the Alliance which has effectively rendered trilateral co-operation inoperative and threatens to change its long established and trusted structure. But both the US and Australia clearly recognise that their vital interests will not be affected by New Zealand persistence with the Ship Visits ban. State Department spokesman Kalb said in late 1985 that 'Should removal of the port ban not be possible and should New Zealand enact adverse legislation, we will have to review New Zealand status as a United States ally under ANZUS.'[45] The Australian Minister for Defence emphasised the independence of the AUSUS connection, irrespective of the condition of the USNZ link by saying, 'While we do not propose to speculate about the outcome of any such review, *the US has stated that it prefers the ANZUS Treaty to remain fully in place with Australia.*'[46] The inviolability of the crucial AUSUS connection in ANZUS and the eventual shape of the Alliance was probably best summed up by the Australian Prime Minister when stating that 'In the case of the US, the Australian government has been reassured by statements expressed to it publicly and privately by President Reagan and other senior representatives of the administration that the Australian-US alliance under ANZUS remains as strong as ever ... In the case of New Zealand, we propose to pursue our important defence relationship on a bilateral basis reflecting both our traditions and the common need to respond to regional security requirements.'[47] The determination of Australia to maintain strong, if not stronger bilateral defence links with its ANZUS partners is clear. This points the way ahead for the ANZUS partners and Australia's role remains more critical than ever.

New Zealand has made its choice and must live with it. Whether the US chooses to still class New Zealand as an ally is a matter between the two respective nations. New Zealand has, and will be given, every opportunity to reassess its position and will always enjoy a warm and special relationship with Australia. Indeed, it is a true test of the strength of the ANZUS Alliance in its present form that so much patience, lack of bitterness and mutual respect has been shown. Having made their commitment to the AUSUS link of the alliance, Australians must now contemplate the future of the ANZAC link and its role in the preservation of the essential nature of the Australia, New Zealand, United States regional security triangle.

Of the ANZAC relationship Australians say their countries are 'as alike as any two separate nations can be.'[48] New Zealanders believe, 'Australia is our closest and oldest ally. Community of interest in defence matters between New Zealand and Australia has long been recognised ... The two countries constitute a single strategic entity ... the objective must be to harmonize our approach within the bounds of independent national policies ...our objectives will overlap but may not always coincide with those of Australia.'[49] The common core of strategic outlook and tradition of mateship between Australians and New Zealanders is legendary. In fact, from early 1840 to mid 1841 New Zealand was part of Australia! The colonial heritage, geographic similitude in situation, origins, language, outlook and constitutional processes committed both nations to one another from this beginning. Direct military co-operation between both countries did not start at ANZAC Cove in 1915 or even the Boer War in 1899. As far back as 1863 the colony of New South Wales (Australia) sent a 1,500 man

Colonial Volunteer Force to help New Zealanders in the Maori Wars.[51] After World War I, formal co-operation expanded considerably. Military links were formalised in 1933 with an agreement of direct interchange of information between respective Chiefs of Staff of both countries. The *ANZAC PACT*, or Canberra Treaty was signed by both nations in Canberra on 21 January, 1944.[52] This important formalisation of defence relationships between Australia and New Zealand is still extant and operating strongly despite being greatly overshadowed by the much more glamorous but far less specific ANZUS Pact. The *ANZAC* Pact caters for joint planning, common doctrine, staff interchange and commonality of equipment, training and logistics arrangements.

The object of the ANZAC Pact is specified in paragraph 13 of its text. 'The two governments agree that, within the framework of a general system of world security, a regional zone of defence comprising the South-West and South Pacific areas shall be established and that the zone should be based on Australia and New Zealand, stretching through the arc of islands north and north-east of Australia, to western Samoa and the Cook Islands.'[53] The ANZAC Pact, a far more technically comprehensive treaty than ANZUS, covering general New Zealand-Australian co-operation, security-defence aspects, civil aviation, dependencies and territories among many other things, is representative of the close coincidence of interest between the two countries and the numerous positive economic, political and military entanglements existing between them. This pact will become even more important in the years to come as the relative closeness of the direct USNZ link dissipates and New Zealand will become identified with the Western Strategic Community through Australia more than the United States.

The future strengthening of bilateral ties between Australia and New Zealand under the ANZAC Pact is both logical and attractive for Australia. New Zealand enjoys greater proximity and influence concerning the smaller nations of the South-West Pacific. New Zealand earmarks practically all the aid it can muster for development assistance to these small states

The AUSUS Link. HMA Ships Adelaide and Sydney RAS with USN Combat Stores Ship White Plains. *Photo courtesy Command Photographic Centre*

which respect and appreciate New Zealand support.[54] Consequently, a strong link with New Zealand provides great benefit in contributing to the enhancement of Australia's regional security in terms of the South-West Pacific. This need for ANZAC co-operation grows even more pronounced following the signing of a fishing treaty between the south-west Pacific state of Kirabati and the USSR in mid-August, 1985.[55] This strategic defence of Australia's 'right flank' is a stipulated and legitimate component of the ANZAC Pact which, in paragraph 15 states '... it is agreed that it would be proper for Australia and New Zealand to assume full responsibility for policing or sharing in policing such areas in the South-West and South Pacific as may from time to time be agreed upon.'[56]

Australians must not subscribe to the simplistic view that New Zealand has 'opted out' of the Western Alliance. This is a sensationalist misconception purveyed by the press and is simply untrue. Though New Zealand may generally be classed as being in the wrong on the nuclear ship visits issue it must also be remembered that New Zealanders are definitely contributing to regional and global defence as members of the ANZAC Pact, the Five Power Defence Arrangement and as members of the MFO, alongside Australians, in the Sinai. New Zealand forces also continue to gather maritime surveillance intelligence for Australia and the US in the South Pacific and she continues to host three US facilities located at Christchurch Airport, Mount John and Black Birch Ridge on South Island. Black Birch Ridge is a USN stellar observatory used 'to obtain locations of stars in the southern hemisphere with the increased accuracy that is required for military purposes.'[56] Accurate star positioning is required for Trident SLBM SIG (Stellar-inertial guidance) systems and to improve ICBM accuracies generally by providing for better assessment of stellar gravitational effects on flight paths. Information from this observatory can even assist in the setting of aiming systems for space-based laser and particle weapons produced as a result of the strategic defence initiative (SDI).[57] Another base, at Mount John, specializes in photographic reconnaissance and is part of the US Space Detection and Tracking System (SPADATS). Data from this organisation is transferred to the North American Air Defence (NORAD) network which is the logical executive command for US Anti-satellite operations.[58] Thus, the Kiwis are not now 'red' and perhaps not even a little 'pink'! They are pulling their weight in the regional area which has always been of primary importance to them. Australians have a more globalist view in many instances and this difference in approach must be respected even if Australians, as a nation, believe New Zealanders have made a mistake in the *single issue* of the ships visit case.

New Zealanders are allies who Australians can count on. If Australia or New Zealand came under threat it would not be long before the other would probably be facing the same danger. There is symmetry in the ANZAC relationship and a strong covergence of interest born of practically identical geostrategic and historic circumstances. The goodwill and close mutual

The ANZAC Link. HMNZS Otago visiting Sydney in 1983. *Photo courtesy John Mortimer*

knowledge built up through more than a century of trade, together with combined military operations in the Maori War, Boer War, World Wars, Korea, Malaysia, Confrontation and Vietnam is the concrete proof of a commonality of heritage and interest which promises ANZAC co-operation in the future. The ANZAC Pact will grow in strength in the future, regardless of what name the Australia-US link takes and even if trilateral co-operation is completely dissolved. In fact the ANZAC link will grow stronger as the USNZ link fragments. Above all, Australians must remember that New Zealand is a friend *and* a neighbour and one is reminded of the old German proverb which says: 'You can live without a good friend but you can't live without a good neighbour.'[59]

The ANZUS Treaty as such is only one of many (about 100) positive entanglements in the form of working agreements and understandings between the three parties involved.[60] Many of these stem from the wider auspices of the ABCA (Armies of America/Britain/Canada/Australia) Arrangement of which New Zealand will continue to be an active associate member under Australian sponsorship.[61] The ABCA agreement is symbolic of the desire for co-operation within the Western alliance and stands for a commonality of interest and unity of purpose. From our experience as human individuals we know that we cannot be bound together merely with pieces of paper. Likewise, nations cannot and indeed have not been tied to each other by treaties in many crisis situations. Tangible, free and active collaboration born of convergence of interest remains the basis of cohesive international relations between allies. Essential unity of purpose stemming from political, economic, cultural and ideological similarity will lead Australia, New Zealand and the US to continue to freely and increasingly associate with each other in the interests of their own welfare. Such bonds as habit, custom and respect for each other's familiar institutions are the ultimate guarantee of strength and cohesion for the Western alliance in which New Zealand has, and will continue, to pull its weight. The right to dissent and bicker among ourselves concerning the technicalities of agreements and implicit obligations involved in them is an aspect of freedom which has been fought for by all partners. At least in the West we can disagree without tanks being brought in to settle the debate![62]

The United States must not be surprised by the independence and apparent waywardness of its small allies. US hands are not clean either. US interests have, unless sobered by the advice of its allies, remained too narrowly American. Both junior partners of the ANZUS Alliance, like other members of the Western Strategic Community, need good leadership and not displays of strength. US policy and crises management in the last three decades has frequently shown inconsistency and ineptitude often bordering on crassness. The tragedy is that the more Washington has played its games of oversophisticated Realpolitik and sacrificed principles to pragmatism it has met with embarrassment, failure and often downright international humiliation.[63] The US must restore the confidences shaken in Asia and Western Europe, with integrity, patience and communication.[64] Australia and New Zealand must not be made to feel like expendable pawns in a Soviet — US global chess game. Their acceptance of US policy cannot be taken for granted or they will 'Jack-up' in the true ANZAC tradition. The US will enjoy 'mateship' with ANZACS as long as it justifies its leadership and doesn't deceive or attempt to ram it down the ANZAC 'throat'. The US relationship with the ANZAC nations remains good and broad-based despite limitations on both sides and Australia, with New Zealand, can do much both inside and outside the region to help restore American prestige. Perhaps one day the US lion may be beholden to the ANZAC mouse? This is particularly so when considering that many senior US officials believe that Australia is a preferable location to Guam and Tinian for the replacement of Clark field and Subic Bay Air Force and Naval bases in the Philippines. The US-Philippines Base Agreement expires in 1991 and the future of these bases is in jeopardy as the Marcos regime fragments. In 1985, a former Assistant Secretary of State for Pacific and East Asian Affairs testified to the US House of Representatives Asia-Pacific Committee that if the Philippines Bases were lost then 'a significantly larger Naval presence in Western Australia should be considered.'[65] He went on to say, 'In the long term, a US-Australian Alliance is central to our strategic interests in the world', with obvious reference to the use of locations within Australia as major staging bases for westward deployment of US forces to the middle-east.[66] Herein lies the greatest potential future challenge to the stability of the US-Australian connection.

In conclusion, close security relations with both New Zealand and the United States are advantageous ties which Australians simply refuse to forego. This is, and will remain, the case regardless of whether the acronym ANZUS is used to label these ties or not. It is the substance of a relationship as indicated by active free collaboration and not an acronym which counts. The critical Australia-US (AUSUS) link, which has been the bone and marrow of the ANZUS Treaty from the start, will remain strong and mutually advantageous. This bilateral

relationship will remain a firm foundation of Australian security and will continue to function in the same, if not in a strengthened, manner as it has previously. After all, since the AUSUS link remained perfectly functional during the 1984–85 Treaty crisis, has it not demonstrated a vigour and resilience of high degree?

With the deterioration of trilateral linkeage between the original ANZUS partners, steps must be taken by Australia to broaden and reinforce the still robust ANZAC link. New Zealand has, and will retain extremely important security and defence relations with Australia. In fact these ties will be strengthened as Australia becomes New Zealand's major ally. A strong framework exists for increased ANZAC co-operation as embodied in the ANZAC Pact of 1944 which can be used to focus Australian and New Zealand efforts in the South West Pacific and some South East Asian areas.

By maintaining strong bilateral ties with the US and New Zealand the substance, even if not the name, of ANZUS will be preserved. Such a system of bilateral links will be politically easier to live with and will remove some burdensome pressures from the otherwise amicable partners involved. This arrangement provides considerable advantages to Australia. The ANZAC link provides Australia with a distinctly regional orientation in its area of immediate interest while the AUSUS link involves Australia in the wider South East Asian theatre, greater Pacific region and the Western Alliance generally. Also, the continuity of the AUSUS link will provide Australia with the same tangible benefits as enjoyed under ANZUS as a trilateral arrangement together with an enhanced prestige in Washington as an extremely loyal ally prepared to take up the slack generated by trilateral dissolution. Consequently, a system of bilateral ties, centred on Australia, is the logical way to proceed in maintaining the *substance* and integrity of a regional defence treaty for Australia. The trilateral regional defence treaty is thus destined to evolve into a bilateral regional defence treaty system which will serve the

HMAS Canberra in 'company' with Russian cruiser Frunze in the South China Sea.
Photo courtesy Command Photographic Centre

interests of Australia, New Zealand and the United States in a more flexible manner.

On July 15, 1984, just a day after the Labour Party victory in New Zealand, the Radio Moscow Domestic Service optimistically broadcast that 'Implementation of New Zealand's Labour election program might set off a chain reaction leading to the collapse of the ANZUS bloc.'[67] Unfortunately the Russians have missed the point, Democracies do not need 'blocs' in order to ensure the reliability of friends and allies. The loyalties of democratic nations are not guaranteed by tanks but by the affinities which stem from freedom of interaction. The Russians don't realise that in this world of 'brand-new' sovereign states, communist surrogates and 'press-ganged' satellite nations, traditional allies (of which they have none) are few and far between. The collective defence embodied in the traditional co-operation by traditional allies such as Australia, New Zealand and the US will remain an important component of regional security. All three will continue to work to maintain their freedom and the freedom of other democracies. The only difference is that they will be working harder in future as the collective defence of the Western World becomes even more important after the 1975 communist victory in Vietnam and the formation of a Soviet backed communist bloc consisting of Vietnam, Kampuchea and Laos. In a global context, the stakes become even higher with the threat of nuclear war if the Western strategic communities cannot maintain a strongly deterrent collective defence.

Such considerations suggest that King Solomon's 'Two are better than one' maxim has not grown tired with age and a collective defence remains the best answer to aggression in the modern age as well as antiquity. In fact, given the nuclear stakes of the modern age, a collective defence may be more important than at any other time in mankind's history. Taking this to be so, it may be appropriate to complete our reflections with some final words from the wise King:

> 'There is a time for everything and a season for every activity under heaven:
> a time to kill and a time to heal
> a time to tear down and a time to build...
> a time to keep and a time to throw away'[68]

Let the three friends work together, as has been their custom, to make this a time of healing and building. A time to keep and *not* to throw away.

NOTES AND ACKNOWLEDGEMENTS

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2. SECURITY TREATY BETWEEN AUSTRALIA, NEW ZEALAND AND THE UNITED STATES OF AMERICA. *(ANZUS TREATY)* Paragraph 1.
3. Joint Committee on Foreign Affairs and Defence. *THE ANZUS ALLIANCE.* (Australian Government Publishing Service), Canberra 1982. p3. Also see A. Renouf (Bibliography) for a comprehensive perspective of Australian insecurity.
4. P. Samuel. *ANZUS WHEEL TURNS FULL CIRCLE.* The Australian. 5th February 1985. p6.
5. Idid.
6. R. Bradden. *LEST WE BE SOLD ANOTHER SINGAPORE.* Sydney Morning Herald. 23rd April 1983. See also *SINISTER TWILIGHT* by N. Barber, (Fontana-Collins, London 1968), for an account of the circumstances relating to the fall of Singapore.
7. R.G. Menzies. Retirement Press Conference. 20th January 1966. Quoted in The Age. 21st January 1966. p6.
8. *ANZUS TREATY Text,* Articles III and IV Paragraph 9.
9. Australia expected to gain some indication of US support on both occasions but no concrete statement of assurance was forthcoming.
10. National Times. *ANZUS PACT ACCORDING TO AMERICAN SELF INTEREST.* 8th–14th February 1985. p24.
11. Ibid.
12. Ibid.
13. Ibid.
14. Ibid.
15. Ibid.
16. Ibid.
17. Ibid.
18. Joint Committee on Foreign Affairs and Defence. *THE ANZUS ALLIANCE.* p28.
19. Honorius was forced to withdraw three legions from the province of Britain in 407 AD in order to stem the tide of the Gothic invasion of the Empire. Rome was sacked three years later and Britain was overrun by the Picts, Caledonians and Saxons.
20. H.G. Gelber. *PROBLEMS OF AUSTRALIAN DEFENCE.* Melbourne, 1970. p91.
21. D. Martin. *ARMED NEUTRALITY FOR AUSTRALIA.* Blackburn, Victoria. Dove Communications, 1984. p227.
22. This figure is a projection based on the average %GDP expended on defence in the 1974–1984 period. See Appendix 2, Table 1. p103 of the 1983–4 *Defence Report* (AGPS Canberra).
23. Joint Committee on Foreign Affairs and Defence. *THE AUSTRALIAN DEFENCE FORCE: ITS STRUCTURE AND CAPABILITIES.* (Commonly known as the Cross Report). See pp108–112 for what is essentially an indictment of Australian Ready Reaction capability.
24. The largest of the many exercises involving US-Australian forces is the Rim of the Pacific (RIMPAC) series. These annual exercises involve many nations from the Pacific littoral.
25. See H. Albinski. *THE AUSTRALIAN-AMERICAN SECURITY RELATIONSHIP.* University of Queensland Press, St Lucia. pp 217–224. This section outlines alleged US interference in Australian affairs and failure to brief Australian officials on activities at joint facilities, eg US General Alert during Yom Kippur War in 1973.
26. F. Cranston. *VALUE OF BASE TO US OPERATIONS.* Canberra Times. 12th April 1973. p11. describes the role of N.W. Cape in the mining of the DRV. The allegation that Australian based ground stations relayed satellite intelligence to the US, who then passed it on to the Israelis is made in *THE ANZUS CONNECTION.* (D. BALL) SDSC Reference Paper No 105. p43.

27. See SDSC Reference Paper 105. p43.
28. The South Pacific Nuclear Free Zone was endorsed by the majority of South Pacific Forum representatives at the Cook Islands Meeting in August 1985. Vanuatu was one of the leading critics of Australia's allegedly ambivalent position with respect to hosting bases linked to US Strategic nuclear array.
29. Joint Committee on Foreign Affairs and Defence. *THREATS TO AUSTRALIA'S SECURITY*. p18.
30. THE 1983 STRATEGIC BASIS PAPER (as *'leaked' in the* National Times, 30th March 1984.) Cited by P. Lewis Young in *THE GREAT AUSTRALIAN DEFENCE DEBATE*. Asian Defence journal 6/84. p96.
31. This statement is attributed to ex-US President Lyndon B. Johnson.
32. Joint Committee on Foreign Affairs and Defence. *THE ANZUS ALLIANCE*. (Australian Government Publishing Service, Canberra 1982.)
33. Ibid.
34. Financial Review. *BEASLEY IN ATTEMPT TO ALLAY ANZUS CONCERNS* 7th June 1985. p7.
35. Ibid.
36. Continental defence operations would initially involve the maximum mobilization of ADF Regular and Reserve components. This force amounts to approximately 100,000 persons. If 20% of this total were applied in front line Naval, Air and Land units the command/control problem would surpass anything an Australian-New Zealand exercise could duplicate. US involvement in these exercises, gives such exercises, at least a modest reality of scale.
37. J. Spender, op cit, p3. gives the Australian view of the 'entree' provided by ANZUS and B. Talboys outlines the New Zealand view in *NEW ZEALAND AND ANZUS* (Ministry of Foreign Affairs, Wellington, May 1982). pp31–46.
38. *DEFENCE REPORT 1983–84*. Australian Government Publishing Service, Canberra. 1984. p10.
39. C. Bell. *ANZUS: THE TIES ARE STRONGER THAN WE THINK*. Sydney Morning Herald. 25th February 1985. p11.
40. The Australian Liberal Party position on ANZUS has been one of strong and consistent support. Similarly, the Labor Party has expressed firm support for maintaining firm alliance links as the relevant quotes in this paper from the Labor Prime Minister, Foreign Affairs and Defence Ministers indicate.
41. *DEFENCE REPORT 1983–84*. op cit. p10.
42. Sydney Morning Herald. *ANZUS: NZ CAN'T HAVE IT BOTH WAYS*. 25th February 1985. p16.
43. Canberra Times. *US PUTS NEW TREATY THREAT TO NZ*. 16th July 1985. p1.
44. The Australian. *NZ WARNED TO REASSESS AS SOVIETS EXPAND BASE*. 1st March 1985. p1.
45. Melbourne Sun. *AUSTRALIA YES TO ANZUS REVIEW*. 29th September 1985 p3.
46. Ibid.
47. Financial Review. *ANZUS PUT INTO MOTHBALLS*. 5th March 1985. p8.
48. Stated by Defence Minister G. Scholes while presenting a paper entitled, *THE STRATEGIC OUTLOOK: THE VIEW FROM CANBERRA delivered in a symposium conducted at the Australian National University in March 1985.*
49. *DEFENCE REVIEW 1983*. (New Zealand Defence White Paper)
50. D. Ball (Editor). *THE ANZAC CONNECTION*. George, Allen and Unwin, Sydney. p34. New Zealand was officially a part of the colony of New South Wales during this 15 month period, from February 1840 to May 1841.
51. Ibid.
52. A full copy of the ANZAC Pact, otherwise known as the Canberra Treaty, is provided for information as it gives a good indication of the very strong framework of co-operation which exists between the two countries. Formally known as *THE AGREEMENT BETWEEN AUSTRALIA AND NEW ZEALAND*.
53. *ANZAC PACT Text*. Paragraph 13.
54. Sydney Morning Herald. *KEEP NEW ZEALAND STRONG HAYDEN TELLS US*. 7th March 1985. p1.
55. The Australian. *KIRIBATI COMPLETES SOVIET FISHING PACT*. 28th August 1985. p2.
56. Cited Strategic and Defence Studies Centre Reference Paper 105 p21 as the reason given to the US House of Representatives Committee on Appropriations in 1981 for the Black Birch Ridge Project. For more details see: House Appropriations Committee, *MILITARY CONSTRUCTION APPROPRIATIONS FOR 1982*. (US Government Printing Office, Washington, DC. 1981, part 1. pp1237–1241).
58. SDSC Reference Paper 105. op cit. p 7.
59. H.G. Bohn. *A POLYGLOT OF FOREIGN PROVERBS*. (AMS Press Inc, New York 1003. 1968. p87.)
60. SDSC Reference Paper 105. op cit. p7.
61. Ibid.
62. An obvious reference to the 1968 Russian invasion of Czechoslovakia. One is reminded of the comment attributed to Marshal Andrei Grecho (C-in-C Warsaw Pact in mid-60s) that the questionable Loyalty of the Italian Communist Party (PCI) would be ensured by his tanks when the PCI came to power. See Sejna pp136–137.
63. The mismanaged US intervention in Vietnam stands out as the epitomy of American humiliation since World War Two. American overconfidence is often seen as plastic and unjustified by many of its allies, particularly in Western Europe.
64. See relevant comments by the C-in-C of the US Pacific Command concerning 'shaken confidences' in US will and ability. (*THE US CANNOT, AND SHOULD NOT, GO IT ALONE*. Pacific Defence Reporter, August 1985 pp11–15).
65. The Australian. *ALLIANCE 'VITAL' TO US MILITARY*. 8th March 1985. p4.
66. Ibid.
67. Quoted in The Australian. *SOVIET HOPES IN LANGE HAVE BEEN FULFILLED*. 6th October 1985. p13.
68. *ECCLESIASTES*. Chapter 3 verses 1,3 and 6.

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NB:- The following reports compiled under the auspices of the Joint Committee on Foreign Affairs and Defence have proven sound sources of information in terms of Australian security circumstances and relationships:

The ANZUS Alliance: Australian-United States Relationships (1982).

The Australian Defence Force: Its Structure and Capabilities (1984)

Threats to Australia's Security: Their Nature and Probability (1981)

(All are produced by the Australian Government Publishing Service, Canberra).

NAVY 75th Anniversary 1911–1986

PRESERVING PEACE

RAN 75th ANNIVERSARY

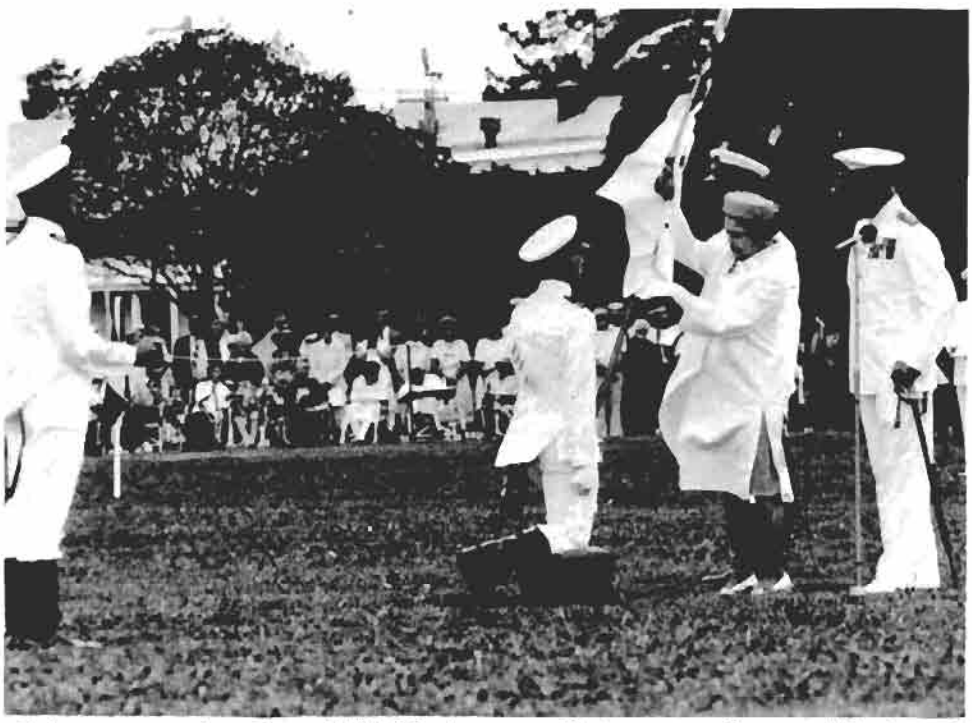
Following are extracts from a report on the 75th Anniversary and Bicentennial activities, provided by Captain B.G. Dunn, RAN, the Project Director.

On Friday, March 7, Her Majesty Queen Elizabeth II presented a new Colour to RAN establishments at *HMAS Cerberus* Victoria. The ceremony was an outstanding success and in attendance were many past and present members of the RAN.

Three RAN Bands, the Fleet Band, Naval Support Command Band and Victoria Naval Band are continuing their high profile tours of Australia. Some recent engagements included the Moomba Festival in Melbourne and Regatta Week in Hobart. A chance to see the bands should not be missed.

On Thursday 10 July, a simultaneous, Australia wide, commemorative, ecumenical service is planned to be conducted in all Her Majesty's ships and establishments. Ex naval members and the general public are invited to attend and participate in this celebratory service and a list of suitable venues in all capital cities will be published in the Directorate's next circular.

Later that afternoon (10 July) another simultaneous, Australia wide event will take place, that being the launch of the Australia Post commemorative pre-stamped envelope commemorating 75 years service by the Royal Australian Navy. This event will occur in ships and establishments in all capital cities and present planning envisages the following timing: West Australia — 1300, Central Australia — 1430, East Australia — 1500.



Her Majesty presents her colour of HMAS Cerberus *Photo courtesy Command Photographic Centre*

The most noteable event remaining in the 75th Anniversary year is of course the Naval Assembly (29 September — 13 October 1986) and the Naval Review planned for Sydney Harbour on 4 October 1986. His Royal Highness the Duke of Edinburgh has agreed to be reviewing Officer and attend other special events during the Assembly. Approximately 40 ships, 26 Australian, seven from the UK, four from the US, three from Canada, two from NZ and perhaps French Navy units are expected to be present.

The Directorate advises that a video of the National Naval Memorial Unveiling Ceremony is available. As the video is available in VHS and Beta, orders must state the type of tape required. The cost is $45.50, which included postage and handling. The video runs for one hour and the belief is that all who obtain a copy will be well satisfied with it. Orders should be placed with:

Helen Wryer, Operations Department, CTC Seven, CANBERRA, ACT 2600.

BICENTENARY 1988

The International Naval Reunion 1988 Coordinating Committee has advised that on March 10 the Australian Bicentennial Authority Directors approved the International Naval Reunion in 1988 as an 'endorsed Bicentennial activity'. The event, therefore, will be included in the 'Bicentennial Calendar of Events'. It will be similar to the International Naval Reunion being held in the United States of America in May this year, which a party of 160 will attend. An advance party of 26 will attend the 32nd reunion of the Royal Canadian Naval Association in Vancouver. A party of some 40 people will also be moving on to the United Kingdom and Europe. Throughout these tours every opportunity will be utilized to publicise the 1988 reunion in Australia.

The committee extends an invitation to all Naval Organizations to stage some activity in conjunction with the 1988 Reunion during the time the progressive reunion is in a particular area.

75th ANNIVERSARY PROGRAMME

The programme of activities related to the 75th Anniversary is most extensive, in fact too extensive to reprint in the Journal. Chapters, or other groups and individuals may like to consider coordinating their own activities with the planned ones in their area. Information may be sought from the 75th Anniversary Directorate, Department of Defence, Canberra.

ONE SMALL SALVAGE: TWO SMALL LESSONS

By Don Queue

Introduction

More than 15 years ago, an *Attack* class patrol boat was proceeding at close to her maximum speed when she grounded on a coral reef. The vessel — call her *HMAS Affable* — rode over the coral for about 70 metres before she stopped. The hull plating was severely dented; the twin spade rudders suffered some damage; the screws resembled horticultural sculptures. But *Affable* remained watertight.

This brief paper is not about navigation. Groundings have happened before and will happen again. Instead, it is about salvage, and more particularly about two specific lessons which emerged from the *Affable* salvage operation.

The salvage operation was successful; and as far as is known, *Affable* is still afloat and operational, though no longer as an RAN unit. Patrol boat operations being what they are, she has no doubt survived other, perhaps less traumatic, groundings in the intervening years.

Situation

Affable had picked a bad time to hit the putty: it was spot-on high water, and springs were only two days off. The weather at the time of the grounding, and throughout the salvage operation, was flat glassy calm. There was not even a suggestion of swell.

The above two factors together probably contributed to the grounding, by obscuring the reef. The good weather, perversely, inhibited the salvage operation — at least, until a way was found to worsen it. More of that later, as Lesson One.

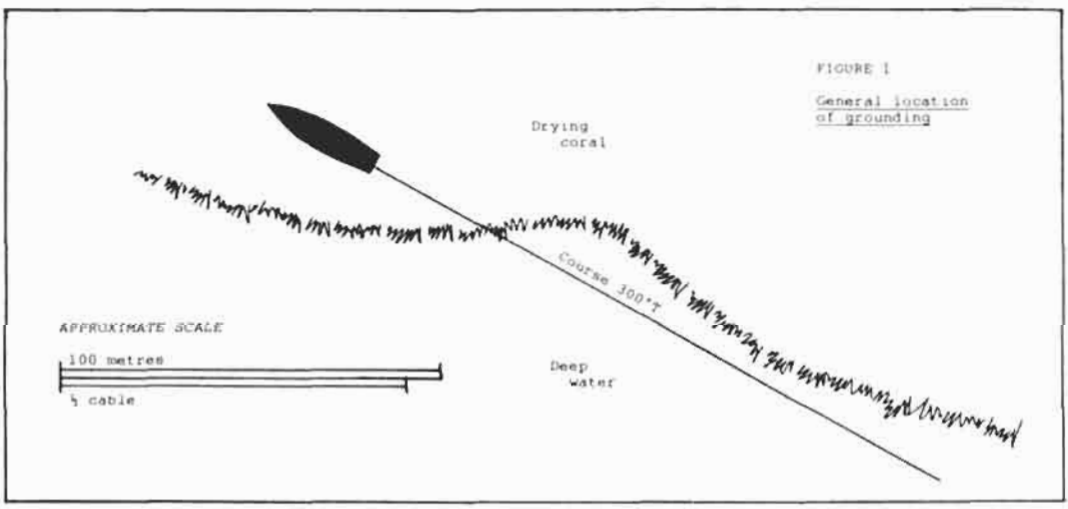
The stranded *Affable* had a 15° list to port, but was basically level in a fore-and-aft line. With a notional draught of two metres, the general depths around the hull peaked at about one metre. The tidal range was a little over that. At low water, *Affable* was high and dry.

The nearest dry land was about a mile away. There was no discernible tidal stream or current. *Affable's* main engines were unusable. Auxiliary power was shut down due to possible obstruction in the cooling water inlets.

Affable had narrowly escaped another grounding earlier in the day. About 10 seconds earlier, in fact. The sketch plan (Figure 1) shows how she skated unwittingly past an outlying horn of her destination-reef, missing it by metres, just before she took to terrafirma with a vengeance. This outlying part of the reef presented problems to any potential salvage vessel; since it was very close to where that vessel would need to be in achieving a straight pull at *Affable*. And clearly a

The Author

Don Queue (a pseudonym) is an RANC graduate who served as a seaman (non-specialist) officer in the RAN from the early fifties to the late seventies. He had extensive small-ship and remote-area experience and held three seagoing commands. His naval career also included staff and joint service postings. Since leaving the RAN he has worked in mining and primary industry with a number of diverse and interesting responsibilities.



lot of straight pulling was going to needed. Any attempt to turn the stranded vessel on the reef ran the risk of pushing a P-bracket or rudder through the hull.

The reef was virtually flat, and characteristically steep-to. The echo sounder recorder 'no bottom' on the shallow setting less than a cable off the edge. Some of the surface coral was live: greasy, spongy, slippery stuff. This factor probably helped minimise the hull plating damage sustained by *Affable* on grounding and subsequent refloating; and certainly helped the recovery. Had the bottom been all dead coral, or rock, it is doubtful whether watertight integrity could have been maintained; and it is even more doubtful whether the available salvage forces could have mustered enough muscle to move *Affable* against the higher friction involved.

The stern of *Affable* was about 40 metres in from the edge of the reef. The vessel therefore had to be moved at least that distance before any part of her would be floating; she had to be moved 70 metres before she would be fully waterborne (assuming the underwater hull survived intact).

The area of the grounding was about 100 n.m. from the nearest commercial port. Safe anchorage was available close to the stranded vessel.

Friendly Forces

Three other *Attack* class patrol boats were quickly available at the scene. An MWL was 'scrambled' with additional personnel and equipment; and made a leisurely arrival a day or so after the other vessels. No other RAN units were in the area. No commercial salvage assistance was available.

Concept

The good book says that ground tackle is the way to go in salvage. Lots of ground tackle, in fact; lots of sustained tension. In the circumstances, ground tackle was out. Firstly, very little was available in the size which would be needed. Secondly, the steep-to nature of the bottom off the reef edge meant that ground tackle would exert a progressively downward force on the *Affable*; and the downward component would increase with her movement towards deeper water. This wouldn't help at all.

The fringing reef south east of *Affable* severely restricted manoeuvering room for the salvage vessels. Additionally there was a strong likelihood of coral outcrops on the steeply shelving bottom. Though these would probably be deep enough for the towing vessels to pass over them in safety, such outcrops could cause a real foul-up if they snagged the tow-line. This suggested that the tow-line must not be allowed to sink deep into the water; therefore it had to be short; therefore it would not have much natural 'spring' in it; therefore it had to be strong.

The concept therefore became:

- ligten the stranded vessel as much as possible;
- find the strongest towing rig and securing points;
- wait for highest high water;
- pull like hell.

Preparations

Operations to lighten *Affable* consumed the best part of 24 hours. Fuel and water were pumped out; ammunition, small arms, moveable stores, portable fittings and personal effects were transferred to other vessels. The heavier parts of the 40/60 mounting were also removed. It was a 126-er's dream. The weight reduction was estimated to be about 25 tonnes, leaving 130 tonnes of patrol boat to be dragged astern 70 metres over the reef.

The standard 'tow aft' arrangement on the patrol boats comprised a nylon hawser secured to welded deck fittings. This arrangement, while probably quite suitable for ocean towing, was judged to be totally inadequate for the calculated stresses involved in the salvage. Almost certainly the welded fitting would part company with the deck, or the deck with the hull.

Affable and the two towing boats were therefore each rigged for towing by middling a shackle of chain cable around the superstructure as a bridle. The bridle thus had two ends which would fall about four metres clear of each vessel's stern, when released. Each of the towing boats also prepared three additional shackles of chain cable for use as a tow 'line', which would be secured to both ends of the (middled) towing bridle.

Owing to the restricted manoeuvering room available to the east, it was decided to use only two of the available three patrol boats for towing, in a tandem configuration. The forward boat would be secured to the after one by the latter's anchor cable and normal forecastle securing arrangements. The third patrol boat, and the MWL, would be kept in reserve.

Inertia and Friction

There were two forces which had to be overcome in moving *Affable* — inertia and friction.

In overcoming inertia, *Affable's* entire mass (130 tonnes) had to be accelerated. Given the horsepower available (perhaps 5500 S.H.P. in total, depending on the revolutions attained) this was not a significant problem. Once an acceleration had been achieved, of course, *Affable* would acquire momentum, which would

work to her advantage.

Friction was a different matter. Being watertight, *Affable* had some buoyancy at high water. The amount was difficult to estimate. Perhaps she displaced 60 tonnes, in which case 70 tonnes was bearing on the reef. This weight was being taken on the length of the keel and along the turn of the port bilge. The surface area of the hull actually bearing on the reef might have been 15 square metres and the bearing pressure therefore about 7 p.s.i. (forgive a return to imperial units for the sake of clarity). This figure, being based on guesswork, was pretty speculative. (If 7 p.s.i. doesn't sound much, try converting it into square feet, to put it in perspective.)

Friction was therefore the major problem. Anything which could increase *Affable's* buoyancy would reduce friction.

Salvage

It was night.

As the time for high water approached, the two towing boats attempted a tandem pull. Maximum available power on both engines was used, which amounted to 1100 r.p.m. in the stationary vessels. This was maintained for only a couple of minutes before a weak link in the towing system parted and the attempt was halted.

The failed part was replaced with a beefed-up version, and the second attempt got underway. The rig seemed to hold, and full power was maintained in both towing boats for about 20 minutes.

Affable showed great reluctance to part company with her temporary abode. The crew on board the stranded vessel reported no sign or sensation of the slightest movement. Rather the reverse, in fact — a sensation of great solidity and permanence.

The towing boats were experiencing difficulty keeping clear of the outlying reef on their port side. Despite full starboard helm they seemed to drift alarmingly close (2-3 metres) to the coral ridge. Slackening off and adjusting position gave only a temporary respite. When the tension came on, with the helm hard over, they drifted reefwards again. Controlling heading by main engines was similarly ineffective. The risk of grounding was not great, but the risk of damage to screws and rudders was severe. (Lesson Two comes from this, but read on).

The attempt was halted again. It was time for a group re-appreciation over a cleansing ale. But it had to be quick. High water was about an hour away, and it would be the highest one for a month.

Then another problem became evident. Although the (doubled) towing bridles had proved adequate, the single lengths of chain cable used as tow line showed signs of distortion in the links. Almost certainly they would part if they were used again.

Fortunately the MWL had on board a reel of 6" wire and a good supply of bulldog grips and suitably-sized thimbles. Her crew (including a few ex-Boomers to whom this sort of thing was meat and drink) set to work to produce two wire tow lines.

Provided the wire proved equal to the task, there remained the simple problem of getting *Affable* unstuck. Despite all the horsepower going into the water she was rock-solid. She remained at her 15° list to port, mirrored in the glassy-calm water by the faint starlight. She gave no sign of going anywhere. Time was running out fast, and so was the tide.

Changing the Weather

Discussions were in progress on board *Affable* when her CO said, in exasperation, 'I haven't felt this bloody boat move since *Amorous* arrived 36 hours ago.'

Amorous was the non-towing patrol boat. She was driven, habitually, with a certain joie-de-vivre, a spirited nonchalance, and an occasional cavalier disregard for the effects of her wake upon other vessels and the shore-line. Such things happen, in the interests of morale, in the patrol boat world.

Some eyes lit up. It was worth a try. The CO of *Amorous* readily agreed to do that which he was best at — making waves. In fact, he said, having had nothing much to do at the time, he had already given some thought to the matter. The line of wave crests generated at the stern, he explained, bears about 150° relative from the ship's head, i.e. 30° either side or right astern when looking aft. *Affable* was lying on a heading of 300° (true). On that basis, said the CO of *Amorous*, the most effective true course for generating waves was 090°. A series of two or three wave crests would then arrive together under *Affable* (See Figure 2). Almost certainly, she would gain buoyancy substantially for a few seconds, which might be enough to get her moving. Once moving, her momentum might be enough to carry her through the troughs following the crests.

Some debate took place on the best speed for generating waves. A body of the assembled thought held that a speed of about 16-17 knots, just prior to 'planing', was best, since at that speed the stern was deepest in the water. The OTC privately disagreed with this view, on the basis that you can't get something for nothing, and the more power you put into the water the more disturbance you create. However he was cognisant of the need to encourage junior officers, and was by no means certain that his own view was correct. It was decided to put the deep-stern theory to the test.

Another Try

It was past high water. The wire hawsers were complete. One towing boat was buttoned on and taking the strain when *Amorous* made her first run at 17 knots. She was navigating on radar, using a parallel index on the stranded *Affable*, having carefully fixed the line of the reef edge. Some quite respectable one-metre waves followed her, and rolled across the reef.

Affable lifted momentarily, then flopped over onto her starboard side at the same 15° angle. It was the best thing that had happened so far, but *Affable* was still stuck fast and the tide was dropping. There was no time to button on the second towing boat. The order was given to *Amorous:* 'Go faster. Come closer. Don't run aground.'

The night was dark, lit only by the stars and the navigation lights of the vessels. *Amorous* rumbled in at maximum speed, her bow-wave faintly phosphorescent. She was headed directly for the reef-edge closest to *Affable*. Watching her, the OTC was conscious that not only were his knickers in a twist, but the contents of same likewise. He mentally prepared himself for having two patrol boats aground, and possibly a collision as well.

Success

At a grossly imprudent distance from danger *Amorous* made a scything turn to starboard past the reef, clearing it seemingly by the thickness of the radar range strobe. The *Amorous* CO later claimed that it was at least 75 metres. It was dark, remember; the reef was invisible.

Again the waves rolled over the reef, bigger ones this time. Again *Affable* lifted momentarily, then suddenly she was doing six knots astern with waves splashing onto her quarterdeck.

Affable was afloat, and still watertight. It was 0200. She had been aground for 57 hours.

Lesson One

The first lesson hardly needs mentioning, since it is abundantly evident from the foregoing text. Put in simple terms, it is this: if a vessel is watertight, and stuck hard, a few waves may generate the extra buoyancy needed to unstick her. In this particular operation the salvage team was fortunate to have at its disposal the means of producing waves to order. Not many will be so lucky.

Notwithstanding that, the writer remains uncertain about some of the theoretical aspects of the effect of waves. Is Figure 2 an accurate representation of what happened? Does the wave pattern look like that? What speed do the wave crests travel at, in what direction, and what influences their speed and direction? Does crest height vary directly with a function of boat speed, as the OTC believed; or was the deep-stern theory the correct one? (*Affable's* refloating may have been due to *Amorous* coming closer, not going faster.) This paper does not attempt to address these questions, but ANIJ readers may be disposed to explore them in correspondence. Even better, the questions raised may be worthy of a separate paper from a more academically-inclined contributor.

Lesson Two

The second lesson is somewhat more obscure, and not so easy to explain. Reference was made earlier to the difficulty experienced by the towing boats in keeping clear of the reef edge on their port side, despite having full starboard helm on. The light dawned on the writer some time after the event when he considered the forces which had been acting on the towing vessels.

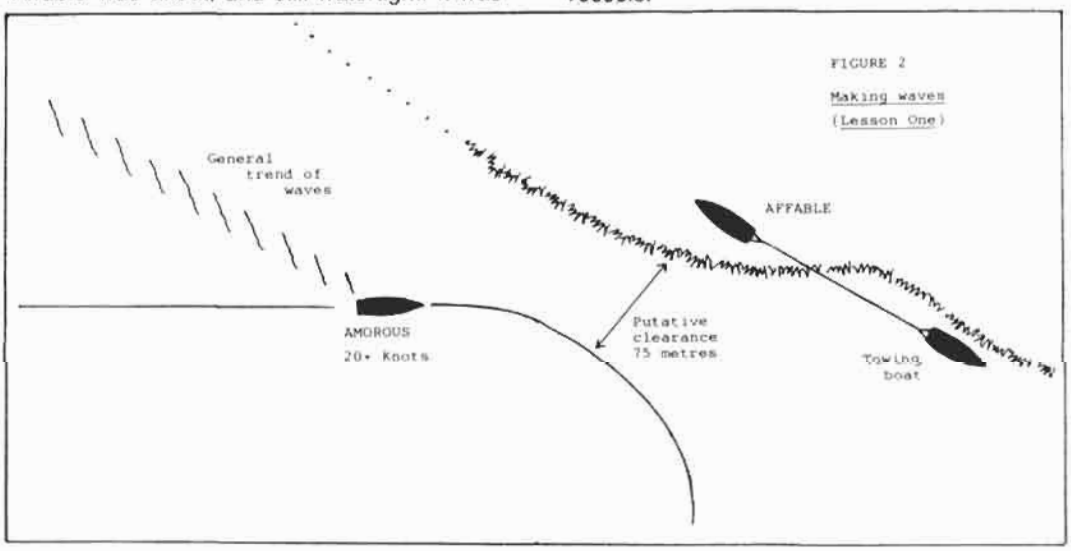
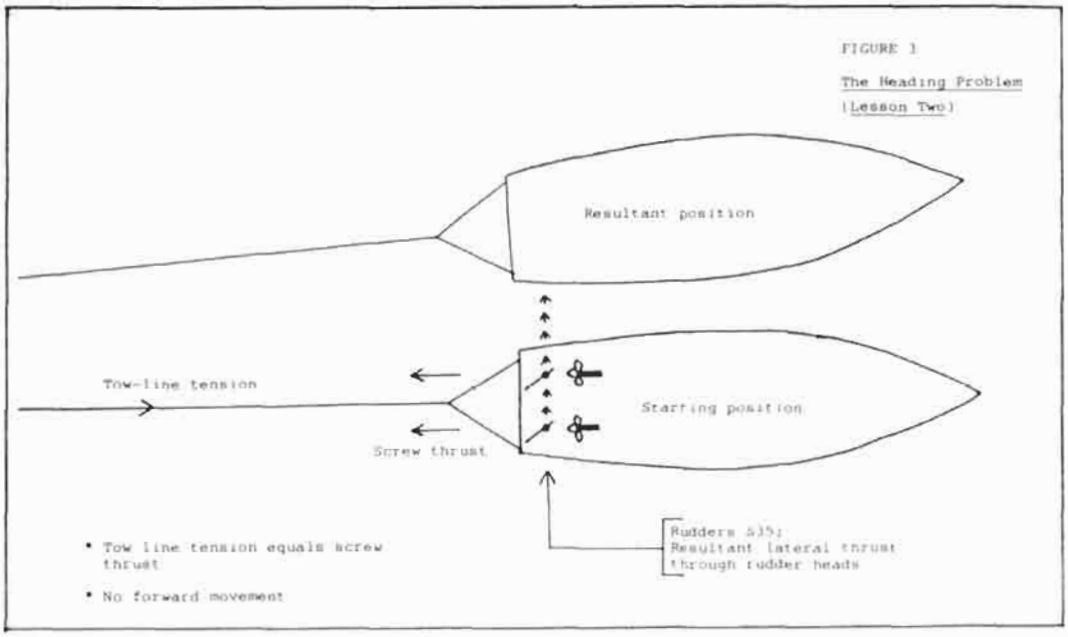


FIGURE 2

Making waves
(Lesson One)



With an immovable tow secured right aft, and tension on the tow-line, the towing vessel's stern is solidly fixed. The vessel cannot turn. With a twin-screw-twin-rudder arrangement, (or single-screw-single-rudder), the screw wash will act on the rudder(s) to move the towing vessel sideways through the water away from the direction of the helm. The effect is comparatively slight, but when no other forces (e.g. wind, current) are acting, it will be significant over a period. (See Figure 3.) Effectively the whole towing system — the towing vessel and the towline — pivots about the stern of the vessel being salvaged. In this particular instance the arrangement of the towing bridle, whereby the towline was effectively secured abaft the stern, magnified the effect; but the result would have been similar had the towline been secured on the quarterdeck.

The towing boats therefore best would have kept themselves off the reef to port by using full port helm. Starboard helm pushed them towards the reef.

This situation applies most markedly when the tow is secured right aft. The effect diminishes as the towing point is moved forward of the rudder(s), and disappears completely if the tow is secured at the pivoting point as in most tugs. But most warships are compelled by their layout to tow from a point close to the stern, and the effect should be borne in mind.

Although the above principle applies basically only when the towing vessel is secured to a virtually immovable object, it may also have application in cases where a low-powered vessel is attempting to tow a very large one. The writer vividly recalls witnessing the near-disaster in 1952 when two *Bathurst* class minesweepers attempted to tow the light cruiser *HMAS Hobart* (cold) in the face of a north-easterly gale. Both the 'sweepers ended up alongside the cruiser, pointing the wrong way, and cut their towlines. The cruiser drifted for 12 hours before a salvage tug arrived to remedy the situation.

The writer has scanned several official and unofficial publications on salvage, but neither of the above two lessons seems to be recorded. This paper has therefore been written essentially to rectify that.

Postscript

After refloating, *Affable* was towed to the nearest slipping facility, where some minor repairs and a screw change achieved steering and one serviceable main engine. She then proceeded on a lengthy escorted passage under her own power to the nearest shipyard capable of undertaking the major repairs still needed. The yard was Walker's at Maryborough; where, co-incidentally, *Affable* had been built a few years before.

On arrival she was met by the assembled Walker's management team all of whom were looking sentimental and somewhat dewy-eyed. *Affable*, they explained, was the first of 'their' boats which had ever come back. They were pleased and proud.

Walker's had reason to be proud. 'Their' boat, of oft-maligned *Attack* class design, had grounded on coral at nearly 20 knots and come off floating, and tight. Not many shipbuilders can boast of that.

WASHINGTON NOTES

by Tom Friedmann

In a recent editorial that attempted to explain the demise of public and congressional support for the continued build-up of America's armed forces, the *Washinton Post* noted that President Ronald Reagan is, to a great extent a 'victim of his own succes in defense.' The rebuilding of the Armed Forces of the United States that began during the Carter Administration has now reached the point that the apprehensions that fuelled public support of defense have themselves been calmed by the build-up.

But there are other important factors behind the precipitous decline in support for the arms build-up. The public's revulsion over the disclosures of graft and corruption in defense procurement and the refusal by the average citizen to trade-off any more social programs to support continued defense expansion are key factors. Most important, however, 'the rock the defense build-up has hit is the deficit, which it also helped create.'

After some two months of frequently intense and divisive debate, Congress passed The Balanced Budget and Emergency Deficit Control Act of 1985 (P.L. 99–177), more popularly known after its co-sponsors in the Senate as Gramm-(Senator Phil Gramm [R Tex.]) Rudmann-(Senator Warren Rudman [R-N.H.]) Hollings-(Senator Ernest F. Hollings [D-S.C.]), or simply Gramm-Rudman. The amendment was attached to the joint resolution raising the public debt limit to *$2.079 trillion, more than double the limit when President Reagan took control of the budget* ($998 billion at the end of FY 1981)!

The legislation amounts to institutional cowardice in that it evolved from the inability of Congress to decide how to allocate monies in the face of the nation's staggering debt. The President has not helped with his oft repeated threat that taxes would be raised only 'over my dead body' and by preferring the dismantling of virtually all domestic programs rather than give up further increases in the defense budget.

But instead of simplifying matters, Gramm-Rudman has become a loose cannon on the deck of America's ship-of-state by threatening the imposition of across-the-board budget cuts.

Like it or not, Gramm-Rudman or its effects will be with us for some time so a basic understanding of it is necessary to comprehend how it applies to national defense.

Gramm-Rudman

The essential feature of Gramm-Rudman is that it sets a goal for the budget process by establishing a 5-year path to eliminate budget deficits and achieve a balanced budget by FY 1991. To reach this goal, the law specifies maximum deficits for each year, which both the President's budget and the congressional budget resolution must meet.

If the deficit targets are not met, then a new procedure to cut spending — called sequestration — is invoked. Sequestration is designed to cut equal amounts of spending from both defense and non-defense programs (subject to special conditions set forth below).

By threatening the enactment of potentially large across-the-board budget cuts (especially likely for FY 1987), proponents hope that the process will force agreement on a budget which is acceptable to both the Congress and the White House. Gramm-Rudman is designed to hold the President's and the Congress' feet to the fire to reach a budget agreement.

The maximum allowable deficits specified in the statute are: FY 1986, $171.9 billion; FY 1987, $144 billion; FY 1988, $108 billion; Fy 1989, $72 billion; FY 1990, $36 billion; and FY 1991, zero. The current deficit projection for Fy 1986 is $220.5 billion, assuming that no further action is taken to reduce it. Deficit projection for FY 1987 and beyond was available from the Office of Management and Budget ([OMB] the budget office of the executive branch of government) on February 3 and from the Congressional Budget Office ([CBO] the budget office of the legislative branch of government) shortly thereafter.

If the specified deficit levels for any year are exceeded by any amount in FY 1986 and Fy 1991, and by $10 billion or more in FY 1987–90, the sequestration process is activated. Sequestration is similar to a rescission in that it permanently cancels already appropriated funds. If differs from a rescission in that the cuts are made across-the-board and go into effect automatically.

The sequestration process is triggered when the CBO and OMB, on January 15 (for FY 1986) and on August 20 (for FY 1987–91), project that the deficit for that year will exceed the target by the allowable amount. The joint report is sent to

that Comptroller General in the General Accounting Office (GAO), who then 'certifies' the findings of the report (on January 20 and August 25). The President must then issue a sequestration order (on February 1 for FY 1986 and September 1 for FY 1987–91) which formally makes the spending cuts specified in the GAO report.

Congress is given one month in which to propose, pass and have the President sign an alternative to the sequestration order (which must achieve the same level of budget savings). If no alternative becomes law, the sequestration order becomes effective on March 1 (for FY 1986) and October 1 (for FY 1987–91). The law also provides for 'revised' CBO/OMB and GAO reports on October 5 and 10, respectively, to take into account final congressional action prior to the start of the new fiscal year. On October 15, the President is to issue a 'revised' sequestration order, which becomes effective immediately.

Sequestration requires outlays be reduced by uniform percentages to achieve the target deficit. However, the law contains special provisions for dealing with certain programs. For instance, Social Security payments (currently about $200 billion) are entirely exempt from sequestration. So are interest payments on the public debt ($137 billion), veterans compensation and pension benefits, major low-income programs (such as Aid for Dependent Children, child nutrition, medicaid, food stamps, Supplemental Security Income [for the aged and blind], and the Women, Infant and Children program [supplemental food for pregnant women and infants and children]), state unemployment benefits, and several other programs.

Further, programs such as guaranteed loans are subject to special restrictions and cuts in health programs, such as medicare and veterans health programs, are limited to 1% in Fy 1986 and 2% in Fy 1987-91. Finally, any programs which have an automatic cost-of-living adjustment (COLA) (except exempt programs) may have that COLA reduced or eliminated but cannot be cut further. (The Federal civilian and military retirees had their COLA for this year, which was to be received on January 1, cancelled by this process).

Once the amount of deficit reduction which must be achieved through sequestration is calculated, Gramm-Rudman requires that that amount be divided equally between defense and non-defense programs.

After the savings from the 'special treatment' programs mentioned above have been taken, the savings that remain to be achieved are totalled and compared to the total amount of spending available for sequestration in defense and non-defense programs. This yields the percentage reduction that must be made in order to achieve the required outlay reduction. Thus, while the total dollar amount of savings to be achieved from defense and non-defense programs is identical, differences in the treatment of special programs and the size of the 'pot' available for sequestration lead to some small differences in the percentage reduction for defense and non-defense programs. For instance, the FY 1986 sequestration requires a 4.9% outlay cut in affected defense programs while only a 4.3% outlay cut from non-defense programs. Despite the different percentage reduction, the sequestration will achieve the $5.85 billion spending reduction for both defense and non-defense programs.

In making the across-the-board cuts, the law requires that each 'program, project or activity' be treated equally when it comes to the amount of the percentage cut. Thus, all defense programs must be cut by an equal amount and each non-defense program must also be cut by an equal amount. However, the law establishes some limited flexibility in apportioning the defense cuts *for Fy 1986 only*.

This flexibility allows the President to, among other things, exempt military personnel accounts from any cuts (he has chosen to exempt about 97% of them) and avoid cuts in some programs, as long as offsetting cuts are made in others (the SDI program was exempted from cuts but additional cuts were taken in other accounts). However, no program can be eliminated nor can any program be cut by more than twice the overall percentage reduction.

Throughout the drafting of Gramm-Rudman it was recognized that the automatic sequestration procedure might be unconstitutional. A backdrop procedure was thus provided for and will be activated if the Supreme Court sustains the decision of the district court in an abbreviated appellate procedure.

Under the backup provisions, the reports of the directors of OMB and CBO would be transmitted directly to Congress. The reports would be received by a Temporary Joint Committee on Deficit Reduction that would be composed of the entire membership of the budget committees of both Houses. Within five days of receiving the report, the committee would be required to report a joint resolution to each house setting forth the contents of the director's report. That joint resolution would be considered under strict procedures (consideration limited to two hours, final vote to come within five days after being reported, no amendments in order, etc.) and sent to the President if passed by both houses.

If the President signs the resolution into law, he must issue an executive order to implement the required budget reductions as though the joint resolution were the Comptroller General's

report under the automatic sequestration procedure.

The backdrop procedure requires Congress to vote on the amount of cuts in each program, domestic and defense, in order to trigger the sequestration. It also allows the President to veto the joint resolution. That will constitute a major political risk for virtually all members of the House of Representatives and Senate. If at least half the members of both houses failed to vote for the resolution, it would not pass and sequestering would not occur, and the Congress would bear the responsibility for 'gutting' Gramm-Rudman. Of course the President could veto the resolution and the onus of scuttling sequestration would then fall on him.

On February 7, 1986, a special three judge panel of the United States District Court for the District of Columbia, in the case of *Synar v. U.S.*, ruled that the automatic deficit reduction procedure established by Gramm-Rudman was unconstitutional because it violated the separation of powers between the branches of government. The unanimous court held that the process under which the President is required to issue a sequestration order implementing the budget reduction specifications of a report prepared by the Comptroller General was unconstitutional because it vested executive power in the Comptroller General, an officer who is appointed by the President but is subject to removal by Congress. In the court's view, powers which are largely executive in nature cannot be conferred upon an officer who lacks the degree of independence from Congress that their exercise constitutionally requires.

The court thus held the President's sequestration order of February 1, 1986, to be without legal force and effect but it stayed its judgment pending appeal directly to the Supreme Court of United States as provided by the Act. The case will be decided this summer.

Because the automatic deficit reduction process was distinct and severable from the remainder of the Act which provided an acknowledged constitutional fall back process in the event of a *Synar*-like ruling, the unaffected parts of the law will be effective even if the lower court is ultimately sustained.

The political effect of the backdrop provisions will be as devastating to members of Congress as had they cut the budget under the old method since they will be required to vote *directly* on budget cuts in *thousands* of programs. Those votes would probably come only seven to eight weeks before the November general election in which all of the seats in the House of Representatives and one third of the Senate will be at risk.

The Defence Budget

President Reagan, who preaches the need for a balanced budget but who has never submitted one to Congress, gave knee-jerk approval to Gramm-Rudman as a means to cut the deficit. The fact that it concentrates more power over the budget in the hands of the executive branch, something the President has striven for during the course of his term, must have been an additional attractive feature to the President.

Originally the administration had hoped that it would be able to exempt defense from the effects of Gramm-Rudman. Only after the President had announced his support for the legislation did the Pentagon fully comprehend that its budget would not be exempt from reduction. Despite some sharp skirmishing by Secretary of Defense Casper Weinberger in defense of his turf, $8.5 billion in budget authority for FY 1986 was cut from the Pentagon in the same manner domestic programs were cut.

From this cut alone, Secretary should have grasped that the mood of Congress and the general population had changed from one of almost unquestioned support for the defense build-up to out-right opposition to a continued build-up. Blithely ignoring this change in the political climate, the Secretary requested a budget that would increase the Defense Department's spending authority to $311.6 billion for FY 1987, a figure which is exclusive of the $8.2 billion for military applications of atomic energy found in the proposed budget of the Department of Energy and which fails to take into account (or account for) an estimated *$60 billion* in overestimates for inflation since 1983.

Secretary Weinberger justified this increase by saying that it was really no more than a 3% real increase over the agreed level for 1986. However, due to Gramm-Rudman, spending authority for FY 1986 has been reduced to $278.4 billion which would mean that the FY 1987 request would be a 12% increase or 8%-9% in real terms.

To say that the FY 1987 defense request took the Hill and most of official Washington by surprise is an understatement. It was as if the President had come up with his budget in a vacuum, somehow untouched by political realities in one of the world's most political environments.

Conceding the fact that most budgets are submitted to Congress with room for cutting already built in, the Fy 1987 budget request for defense was seen as going beyond normal self-protection provisions. The request was seen in much of official Washington as so blatant in its failure to publicly acknowledge realities as to be arrogant, further fueling the backlash against further increases in the defense budget.

The President did not have to wait long for a response to his budget proposals. For all intents and purposes they were dead the day they were

presented. Opposition to further expenditures was fuelled by the interim report to the President of this Blue Ribbon Commission on Defense Management which was harshly critical of the command structure of the armed forces and the acquisition procedures of the Defense Department.

Within days, the President realized that his proposals were in deep trouble and, contrary to the advice of some of his senior advisors, he decided to address the nation on the subject of continuing the defense increase. The speech was a notable — and unusual — failure for the 'Great Communicator.' The President was unable to bring about a change in either public or congressional opinion.

Meanwhile, Congress has formally rejected the President's budget and is attempting to draft a budget that will prevent triggering sequestration. On March 19 the Senate Budget Committee, which is controlled by the President's Republican Party, under the unprecedented combined leadership of Committee Chairman Pete Domenici (R-N.M.) and Ranking Minority Member Lawton Chiles (D-Fla.), slashed *$25 billion* from his defense request. The Committee's budget also raised taxes by $18.7 billion (despite the President's 'death threat') while ignoring many of the President's proposed domestic cutbacks.

Although it is too early to tell where the budget axe will fall, the Defense Department's request came up with six winners over the 1986 projection of its 1987 request and six losers. The winners were such easily cushioned, big-ticket 'investment' items as the F/A–18 Hornet, F–16 Falcon, A–6E Intruder, MC–130H special ops plane, DDG–51 program, and the Strategic Defense Initiative. The losers were 'sustainability' items that Congress has been loath to cut (in the hopes that Congress would restore funding) such as the Hellfire antitank missile, Phoenix air-to-air missile, Chapparal air defense missile, TOW II anti-tank missile, RAM ship-defense missile and the Sidewinder air-to-air missile.

It is too early to say at this time exactly how much the Pentagon budget will be for 1987 because the budget process is far from over. Indeed, if recent history is any guide, it will be with us for many months to come. This year's elections will undoubtedly further destabilise this already teetering process.

One thing is certain, however. The President and the Congress are playing a sophisticated game of 'chicken' with the budget with each party 'daring' the other not to cross the line it has drawn. The future of the American people is at stake in a game in which they stand to lose much and gain little. They deserve better from their public servants.

How The Washington Post's cartoonist Dana Summers sees Gramm-Rudman

GLENELG'S NAMESAKE WARSHIP

This account of the services of *HMAS Glenelg* is based on one prepared by former members of the Ships Company and collated by Lieutenant R.G. Milne, RANVR. The preparation was a response to a suggestion by the Glenelg City Council to Commander A.J.T. Bennett, RANR, who until recently was Commanding Officer in the Adelaide Port Division.

As many people and communities in South Australia begin celebrating the State's Jubilee 150, not many of them may perhaps remember that there were once five small warships, generally known as corvettes, bearing the names of SA towns.

One, *HMAS Wallaroo*, was sadly a war casualty. Notably, *HMAS Glenelg* commemorated the seaside suburb where the State began with the landing from *HMS Buffalo* of Governor Hindmarsh and the first colonists on 28 December 1836. One of the others, *HMAS Whyalla*, was the first corvette built in SA.

Indeed, *HMAS Glenelg* was originally intended to be the first but the Broken Hill Pty insisted, reasonably enough, that the first corvette built by it at the Whyalla shipyard should bear that name. In the event the name GLENELG did not go into the Royal Australian Navy until 25 September 1942 when *HMAS Glenelg* was launched at Cockatoo Dock by Mrs H.V. Evatt, wife of the Minister for External Affairs, Dr Evatt.

Glenelg, the 56th of the 60 Bathurst class vessels built was unusual in that she was one of the very few not fitted for minesweeping. This lack was not particularly deplored by her crew as minesweeping is, at best, a risky operation, although the absence of a winch aft meant harder work in handling hawsers. She also was unusual in that she was fitted, late in 1944, with one of the first two prototype sets of the then new surface radar. The other is believed to have gone into one of the RAN Cruisers. This radar replaced the earlier equipment fitted in *Glenelg* exchanging the fixed aerial for a rotating one and providing a completely new visual display on the bridge. Forty years on this is now standard but it meant that the officer on watch no longer had to rely on reports of ranges and bearings passed by voice from the radar compartment one deck below.

After her commissioning on 16 November 1942, *Glenelg* was engaged in convoy work off the east coast of Australia. During one convoy in heavy weather off Port Macquarie, *Glenelg* had a torpedo fired at her. Stoker C.S. (Tim) Spencer, now of Tea Tree Gully, recalls seeing a torpedo out of control and breaking surface to starboard before passing harmlessly astern.

Later, *HMAS Glenelg* was part of the convoy system, mainly from Townsville, to New Guinea, the so-called Operation Lilliput, which built up Milne Bay as a main base for the Allied drive into New Guinea. Later while herself based at Milne Bay, *Glenelg* spent some days on guard over the salvage of the US merchant ship President Grant, ashore on Uluma Reef.

Soon after, while on patrol off the Japanese held coast, some of her crew came directly under fire. *Glenelg* had launched a boat to exercise her armed boarding party and to investigate the wreck of a Japanese barge on a small island in Maffin Bay. After walking around the Island (really little more than an exposed reef) and avoiding trip wires set by the Japanese,the party exercised firing a variety of weapons and some of the shots apparently carried to the shore a few hundred metres away. Although it was never intended as an attack on the Japanese they retaliated with what appeared to be mortar shells, some falling uncomfortably close. The boat and its crew retired (to use the naval phrase) 'in a seamanlike manner', but without wasting any time!

On 18 October 1944, on patrol off the Woske River, *Glenelg* fired her 4-inch gun in anger for the first time. An American barge crew, confused as to their position, had reported having been fired on by Japanese mortars. *Glenelg* closed to 3000 yards and was herself fired on. The Japanese fire was silenced with 24 rounds.

Two days later *Glenelg's* assistance was sought by a US Army patrol which had been pinned down by Japanese shelling. A boat's crew under Lieutenant W.H. Pennington RANVR was sent in to the beach. Although the boat was swamped in the surf, Lieutenant Pennington

(who was the ship's Gunnery Officer) and Signalman W.J. Greet were able to direct *Glenelg's* gunfire by Aldis lamp from the beach, effectively enabling the withdrawal of the US patrol and the evacuation of its wounded.

A minor, but satisfying, service on 7 July 1944 was the recovery of a US landing craft abandoned and adrift miles off Langemak. A steaming party, put aboard from *Glenelg*, worked the craft back into Madang. There it was welcomed gleefully by Australian forces who were always short of such equipment.

As the war moved northward *Glenelg* found herself in turn in Hollandia, Manus, in the Admiralty Islands, Mios Woendi and then based at Morotai in the Halmaheras.

A satisfying rescue was that of an American pilot of a Mustang fighter that had 'ditched' near Morotai just at dusk on 4 December 1944. *Glenelg* had watched the plance circling for some time without realising it was in trouble until the pilot bailed out. The tropical dusk closes in quickly and as the parachute opened, Leading Signalman V.L. Knight, without waiting for orders, turned the 24 inch signal lamp on and followed it down. His action undoubtedly helped in the quick recovery of the pilot. One of *Glenelg's* officers still cherishes the 'short-snorter', an American form of greeting, thanks or memento (he never discovered quite which) given to the Wardroom by the pilot. It is a US one dollar note (or bill as they would say) signed 'Lt. Chas R. Gana, 908 East Sixth, Pine Bluff, Arkansas' and giving the position 01 46 N 129.05E and the date. It would be interesting to know whether Lieutenant Gana, if alive, still has the Australian ten-shilling note given to him in return. Leading Signalman Knight later became one of the very few, if not the only, naval rating demobilised in wartime to train for the priesthood.

Working out of Morotai *Glenelg* had the usual range of convoy, patrol and anti submarine guard ship duties, including one convoy to Leyte Gulf in the Philippines, the farthest north she went.

On 16 December 1944 she suffered the indignity of being rammed on a perfectly clear night, by the US Water Transport craft *Vaquero*, but suffered almost negligible damage. The *Vaquero* (231 tons) was however built of wood and had fractured her stem post. She was carrying explosives. She was towed by *Glenelg* in a sinking condition towards Mios Woendi but had to be beached before reaching a safe berth. *Glenelg* had the satisfaction of receiving from the *Vaquero's* Chief Officer a written acknowledgement that he accepted full responsibility for the collision in that 'he had mistakenly altered course to port'.

As well as convoys *Glenelg* also had a number of solo jobs including calls at Balikpapan and Tarakan. On the Tarakan job she towed the famous commando ship *Krait*, to save her fuel. *Krait*, a former Japanese fish-carrying vessel, had been seized in December 1941 by a boarding party from a corvette *HMAS Goulburn* and converted for commando raids, including one on Singapore harbour.

Glenelg was the only Australian ship in the impressive force which escorted the supply vessels for the retaking of Brunei in Sarawak. They arrived, as planned, three days after the attack. Officers recall their awe as, steaming down the North Borneo coast on the night before arrival, they saw the tremendous glow in the sky from the burning oil wells and installations at Miri which had been sabotaged by the Japanese as they retreated. They were seeing the glow from at least 60 miles away.

On VJ day, 14 August 1945, *Glenelg* was in floating dock in Darwin for routine bottom cleaning and propeller shaft inspection. The first her crew knew of the Japanese surrender was when a big British tanker at anchor nearby began sounding Vs on her siren. No one needed to have that message translated.

After the formal announcement of the surrender, *Glenelg* with other corvettes took part in the evacuation of the pitifully few survivors of Gull Force, the 2nd 21st Battalion from Ambon. Her then Commanding Officer Lieutenant Commander H.G. Whitebrook, RANR, is on record as thinking 'the Ambon operation to be a hallmark of note in the ship's history'.

After an earlier attempt by other ships to rescue these POW when Japan was collapsing, an attempt aborted because the Japanese in Ambon (and elsewhere) were not prepared to surrender, *Glenelg* headed a force of three other corvettes, HMA Ships *Junee*, *Cootamundra* and *Latrobe*, which on 10 September 1945 entered Ambon harbour. In all, 123 AIF troops, nine US Servicemen (mainly airmen who had been shot down) and seven Dutchmen were picked up. *HMAS Latrobe* was diverted to Piroe Bay where she embarked 25 Indian troops.

Steaming up the harbour the corvette crews could see the AIF men (those who could stand) on the wharf. It was then that *Glenelg* was deliberately guilty of a breach of naval flag etiquette. At that time, before the RAN adopted its own distinctive ensign, it was impossible to distinguish, from her ensign alone, a British from an Australian warship when at sea. One of the Petty Officers, with commendable insight, asked whether they could not in some way indicate to the Australians on the wharf that they, too, were Australian.

So a Commonwealth Blue Ensign, normally worn only at the jackstaff forward and then only in harbour in peacetime, was hoisted at the

yardarm. Its significance was not lost on the AIF survivors. That Blue Ensign was later presented to the City of Glenelg but regrettably all trace of it seems to have been lost.

Glenelg later returned to Ambon with other ships in the naval component of the occupation force under Brigadier W.A.B. Steele. Part of their task was to supervise the dumping by the Japanese in deep water of the huge quantity of material stored by them for their planned attack on Australia. Apart from the ammunition which, because of its age was highly dangerous and was disposed of by Army demolition teams quickly (and explosively), this included a vast range of meteorological and scientific instruments, surveying equipment and even 1-metre searchlight reflectors.

Soon after, *Glenelg* was ordered to Fremantle to pay off. Lieutenant Commander Whitebrook has privately recorded that in the absence of specific orders to the contrary (although Fremantle is roughly due south of Morotai) he saw no good reason why the voyage should not be by way of Brisbane, Sydney, Melbourne and Adelaide, the long way around. And so *Glenelg* came home, after more than three years and 110,000 miles steaming.

In Melbourne, *Glenelg* was inspected by the First Naval Member, Admiral Sir Louis Hamilton. Then she visited Adelaide, anchoring off the Glenelg jetty on 2 December 1945. A civic welcome and luncheon in the Town Hall was given to the whole ship's company by the Mayor, Mr. (later Sir) Baden Pattinson. As well as the Blue Ensign mentioned above, Lieutenant Commander Whitebrook gave to Mr. Pattinson a Samurai sword surrendered to him by the Chief of Staff to the Japanese commander in Ambon.

HMAS Glenelg paid off into reserve in Fremantle in January 1946. Her crew, apart from the West Australians, returned to the Eastern States by troop train. On 2 May 1957 she was sold to the Hong Kong Rolling Mills Ltd and was towed away for breaking up on 30 September 1957.

Commanding Officers

During her service *Glenelg* had three commanding officers of widely different backgrounds. The first was Lieutenant A.F. Summerfield, RANR(S). Lieutenant Summerfield was a Scots merchant service master with long experience on the China Coast who was evacuated to Australia when Japan entered the war.

He was relieved on 9 May 1944 by Lieutenant L. Robson, RANR(S), an Englishman who had been around the Horn in sail. Before the war he had been Second Officer in the Adelaide Steamship Co's motor vessel *Moonta*, remembered for the 'Gulf trips' — six days for six pounds. He had also served in the surveying sloop *HMAS Warrego*. He left *Glenelg* on appointment as Port Director, Nauru. After the war he served in Broken Hill Pty bulk carriers on the Australian coast.

HMAS Glenelg *Photo courtesy Commander A.J.T. Bennett RANR*

Lieutenant Commander H.G. Whitebrook had, even before the war, been in the RAN Reserve, with that rank from April 1937. During his service in *Glenelg* he was, by virtue of seniority and his status as a 'qualified officer', the senior lieutenant commander in the area.

He was mobilised at the outbreak of war and appointed to command the boom defence vessel *HMAS Kookaburra* on 13 September 1939, the first Reserve officer to command a seagoing ship. He held various staff appointments in Sydney and Fremantle, commanded *HMAS Heros* and also served as surveyor in the surveying vessel *HMAS Benalla*. Before appointment to *Glenelg* in command he was Naval Officer in Charge, Cairns. Lieutenant Commander Whitebrook, a Sydney bank manager, was promoted to Commander and later placed on the reserve list. He now lives in retirement in NSW.

Other Officers

Only two of *Glenelg's* officers were from Adelaide. Lieutenant J. Tregoning, RANR, an engineer and business man, and former member of the Adeliade City Council, is more widely remembered as a University and State cricketer. Now of North Adelaide he served for some time as Gunnery Officer.

Lieutenant R.G. Milne, RANVR, of Torrens Park, an Adelaide journalist now retired, was First Lieutenant from 1st March 1944. He had previously served in RN ships in the Western Approaches, and as Asdic officer in the Indian Ocean and Persian Gulf.

During her Ambon duty *Glenelg* had, temporarily, two Beach Commando officers. One, Lieutenant J. Penberthy, RANR, was even then well known as a musician, conductor, teacher and composer. Fellow officers recall watching him writing down the music of a haunting tune popular in the native theatre at Ambon and sitting on deck one evening whittling, from a piece of bamboo, a flute which he then proceeded to play.

Two of the original officers were Lieutenant W.H. Pennington, RANVR, and Lieutenant C.D. Hancox, RANVR, then newly appointed sub lieutenants. Lieutenant Pennington was a Sydney solicitor, now living there in retirement. He was Gunnery Officer until appointed to *HMAS Deloraine* as First Lieutenant. Lieutenant Hancox, a Sydney schoolmaster, who was Anti Submarine Officer, left *Glenelg* to do a specialist anti submarine course in Sydney. He remained in the reserve after the war and retired with the rank of lieutenant commander in 1954. He now lives in retirement in Tasmania.

PETER MITCHELL TRUST ESSAY COMPETITION

Did you enjoy reading Alvin Toffler's *Future Shock* or John Naisbitt's *Megatrends?*

Why not try your hand at writing on a topic along a similar theme?

The Peter Mitchell Trust Fund Essay topic for 1986 is:
'The Effects of Changing Trends and Standards in Society on a Disciplined Service'.

The rules are simple:

- the competition is open to members of British Commonwealth Navies of the rank of Commander AND BELOW on continuous full time service
- essays must be original, typewritten in English and between 3 000 and 7 000 words in length
- you are encouraged to provide original thought rather than just repeating the ideas of others — all debt to other sources must be acknowledged
- a pseudonym must be used
- the competition closes on 31 October 1986 and entries must be post marked on or before that date

Prizes are awarded in four sections:

- Open prizes of $1 250 and $250 worth of books or instruments
- An officer and a sailor section, each with prizes of $1 000, $500 and $250
- Staff Course prize of $1 000

The conditions of the competition are detailed in DI(N) PERS 51–1. Any further information can be obtained from Commander Stuart Tapley, Deputy Director of Naval Education, on (062) 653359.

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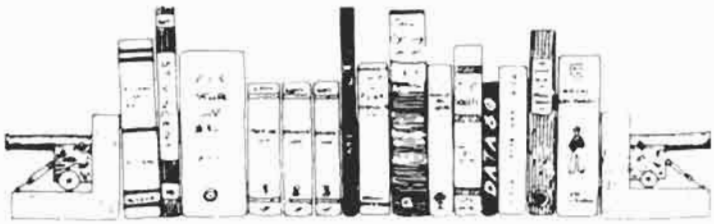
BOOK REVIEWS



BATTLESHIPS AND BATTLE CRUISERS 1905–1970. Siegfried Breyer, Janes, re-released 1985. (Available in Australia from Thomas C. Lothian Pty. Ltd., 11 Munro St. Port Melbourne 3207. RRP $49.95).

This comprehensive and authoritative reference work by the noted German authority on naval affairs, Siegfried Breyer, represents almost two decades of research and study. Translated from the German by Alfred Kurti, its 480 pages contain descriptions of all battleships and battle cruisers during the period covered, irrespective of whether they entered service, only reached the drawing board stage or remained uncompleted. Commencing with a comprehensive historical survey of the large fighting ship going way back to 4000BC, a major section of this work is devoted to developments in design and armament.

With Teutonic efficiency the author described every class or type under:

- General information;
- Armour and protective equipment;
- Propulsion plant;
- Armament;
- Other information.

This is followed by a comprehensive history of every ship and its ultimate fate.

Battleships and Battle Cruisers covers ships and projected ships of these types in the navies of the United Kingdom, United States of America, Germany, Brazil, Japan, Spain, Italy, Argentina, Russia/Soviet Union, Austro-Hungary, France, Turkey, Chile, Greece, Netherlands, Poland, Portugal and Yugoslavia.

One most interesting entry is the 1939–40 proposed, three-battle-cruiser programme for the Netherlands Navy. This project came about from the Netherlands considering it necessary to support and reinforce those parts of their navy that were based in the Netherlands Indies with the coming political changes in South East Asia. Three designs were under consideration for a 32,000 tonne battle cruiser armed with 12–12 inch guns and capable of 34 knots when Germany invaded the Netherlands in 1940. Ironically the Netherlands had been negotiating with Germany regarding the suitable design of underwater protection as employed in their Scharnhorst-class battle cruisers. This was after an initial unsuccessful approach by the Netherlands to visit one of Italy's new battleships.

The one small criticism I have, alas a common error, is referring to our first flagship, the battle cruiser *HMAS Australia*, bracketed with *HMS New Zealand* as 'British ships paid for by the dominions whose names they bore'.

One interesting double page spread included inside the back cover of this book is a map of the world with all the building and sinking sites of the battleships and battle cruisers pinpointed.

Complimenting *'Battleships and Battle Cruisers 1905–1970'* are 922 side elevations, deck plans, cross sections and detail sketches. These superbly detailed and most accurate drawings, all by the author, are an intricate part of the book and are of great importance in the overall context.

With the prices of heavily researched and time consuming reference works these days this book weighs in with a somewhat modest price tag of $49.95. Recommended reading.

Vic **Jeffery**

THE NAVAL MISCELLANY — VOLUME V, Ed N.A.M. Rodger, George Allen and Unwin UK, 546pp.

The dearth of recorded information which can be located for research is a problem often encountered by historians, particularly those in Australia. This is more so for those whose interests lie in navies because Australian authors seem to be drawn to write about Army or Air Force rather than the silent service.

The Naval Miscellany — Volume V is therefore a refreshing source of interesting items which will delight those of naval bent, even if not intent on serious historical study. Published by George Allen and Unwin UK, and available through their Australian office at 8 Napier St. North Sydney NSW, this volume is produced by the (British) Navy Records as No 125 in a series of publications. Founded in 1893, the Society has the purpose of printing rare or unpublished works of naval interest. It depends greatly upon the kindness and generosity of the owners and custodians of manuscripts and this volume also draws on the resources of the British National Maritime Museum, the Public Records Office, the British Library, and the Naval Historical Library, to name but some.

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Further information on request to the Advertising Manager.

The selections provide a wide coverage of naval operations and experiences and readers will find a variety of interest ranging from an account of the Royal Dockyards in 1672–78, documents relating to the Copenhagen campaign post — Trafalgar in 1807, to selections from the memoirs and correspondence of Captain J.B. Foley CBE, RAN. (1896–1974). This latter is edited by regular ANI contributor Lieutenant James Goldrick, RAN and provides a fascinating pot-pourri. The memoirs take us into the gunrooms of the Grand Fleet during the Great War 1914–1918 where Foley served in *HMAS Australia* as a Paymaster's Clerk and then move on to give many illuminating backdrops to decisions affecting the conduct and structure of the RAN made in the years 1921–1948 when Foley filled important posts as Secretary to FOCAF, the 1st Naval Member (1931–1944), and as the Australian Naval Liaison Officer in London. While in London Foley had much to do with Australia's purchase of *HMAS Sydney* and *HMAS Melbourne* and his correspondence provides many snippets of the whys and wherefores associated with that acquisition. Included is one delightful account of a luncheon given for the Australian Cricket Team at Claridges London in 1948, attended by Foley and the 1st Sea Lord. Their edited conversation and its impact upon the RAN is revealing indeed.

Miscellany Vol V includes many other contributions, equally rewarding. De Robeck's correspondence to the Admiralty while he commanded the Dardanelles fleet at Gallipoli in 1915 gives the reader an enthralling account of that campaign from a sailor's point of view. Those acquainted with naval discipline will find interest in the papers concerning the aftermath of a battle off Cape Santa Maria, 19–24 August 1702. Courts martial and executions of warship captains are rare events, to say the least, and the circumstances described can only be regarded as very unusual. The life of a midshipman in the strict environment of the Royal Navy, 1818, is drawn in the pages of his letters home. At a time when life at sea was hard for all the unique position of a 16 years old boy in the regimented hierarchy clearly shines through. Although from good family Midshipman Edward Noel found few privileges at sea.

This book has something for everyone but is aimed at the historian or student. It has no theme or narrative for the items are diverse entities without a common thread. The reader's attention is held nevertheless by these actual accounts of events and life in naval history, recorded by those who took part. *Miscellany Volume V* continues with worthwhile work of the Navy Records Society and would form a valuable part of the library of those people with maritime interests.

Alan Brecht

CONWAY'S DIRECTORY OF MODERN NAVAL POWER 1986, Hugh Cowin. Conway Maritime Press, London. Available in Australia from Princeton Books Pty. Ltd. Cnr Mills and Herald Streets, Cheltenham, Victoria 3192. RRP $98.00

This major reference work veers away from the normally cumbersome and heavily detailed naval reference book which we have come to accept. The author, Mr Hugh Cowin, has attempted to provide a more concise form of essential information and details.

Comprising 288 pages and illustrated with nearly 500 good quality black and white photographs the book is divided into four sections.

The first section titled 'Navies' is divided into two parts, Leading Navies and Other Navies. Leading Navies covers the navies of the United States, Soviet Union, Chinese People's Republic, Royal Navy and the French Navy. Each country is summarised and then the book runs through its personnel, composition of forces, order of battle-naval forces and order of battle-naval aviation.

The second part of this section relies on a summary of each nation's navy. It refers to Australia as appearing to be concentrating its resources on the specific areas of regional anti-submarine warfare and coastal water policing since losing its aircraft carrier. This second part runs eight separate tables listing the strengths of the other 103 navies of the world ranging from Albania to Zaire,in their various regions.

Tilted 'Warships' the second section covers 380 warship and submarine classes including 14 aircraft carrier, 39 submarine, 21 cruiser, 44 destroyer and 55 frigate. Five Royal Australian Navy photographs appear in this section — the submarine *HMAS Oxley*, destroyer *HMAS Vampire*, patrol boat *HMAS Bendigo*, destroyer tender *HMAS Stalwart* and fleet oiler *HMAS Supply*.

Section three titled 'Naval Aircraft' covers 66 varieties of naval aircraft. Divided into Airborne warning, anti-submarine aircraft, anti-submarine helicopters, bombers, missile directors, fighters, strike fighters, marine patrol, transports and trainers it is a most comprehensive summary.

The fourth and final section titled 'Naval Missiles and Guns' has 48 entries from naval strategic missiles through to naval guns, all in an easy-to-read format.

I found some minor errors in this book, such as no mention of *HMAS Voyager* in the history of the RAN's Daring-class destroyers and the claim that the RAN had four corvettes. However, these are minor criticisms.

The only drawback I feel may be the price ($98.00), a problem with all extensively researched, time consuming reference works.

Vic Jeffery

BRITISH FORCES IN THE KOREAN WAR

The British Korean Veterans Association intends to publish a book, *British Forces in the Korean War*, early in 1987. Part of the book has been devoted to Royal Navy, Fleet Air Arm and Royal Marines Commando contribution. All proceeds from the sale have been devoted to BKVA.

Those subscribing prior to publication will have their names included in an appendix in the book. The name of their ship, regiment or corps will also be included if the subscriber served in British forces in the Korean theatre.

All orders should be made on the form printed below and posted to:
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AUSTRALIAN NAVAL INSTITUTE LIBRARY

The Library currently resides in 'A' block Russell building, unfortunately not the most convenient location for many of our members. We have three display cabinets now bulging with books, journals and magazines.

As you would expect the library has a largely maritime flavour but there is a cross pollination of other material. We hold all back copies of the ANI journal. The colour journals of recent years certainly makes a world of difference compared with the black and white originals.

The library is not busy and this is largely a factor of location as already mentioned. I would like to make the limited facilities as available as possible within the bounds of our limited resources, so I will be very pleased to consider requests for books. Such requests should be made by letter or telephone. I would also welcome any suggestions from ANI Chapters for use of books by ANI members within the Chapter — say short term bulk loans of a number of books to a Chapter librarian.

The library operates within a small budget which allows for the purchase of new books or materials necessary for library upkeep. However, the main source of books is by donation — several members have been remarkably generous and here I must single our Mr Bill Guidice of Sydney for his particular generosity.

A current library listing has been included with this edition of the journal. I hope, in future journals, to publish a list of new titles received by the library in the previous quarter.

All requests for loans, donations (which would be most welcome) or any other matters related to the library should be referred to the ANI Librarian A-3-24, Russell offices, Canberra ACT 2600. (Telephone (062) 65 5121)

Paddy Torrens

LIST OF ANI LIBRARY HOLDINGS AT 1 MAY 1986

	Admiralty Manual of Seamanship — Vol 1
	Admiralty Manual of Seamanship — Vol 2
	Manual of Seamanship (1932) — Vol 2
	Admiralty Manual of Navigation — Vol 1
	Admiralty Fleet Air Arm (1943)
Acworth, Bernard	Britain in Danger, Eyre & Spottiswoode (1937)
Allan, I	Warships and Navies (1973), Shepparton, Surrey
Andrews, Graeme	Log of Great Australian Ships, A AH & AW Reed (1980)
Andrews	Fighting Ships of Australian And New Zealand
Anon	Outline of Australian Naval History, an Canberra, AGPS, (1976)
Badger, GM (Ed)	Captain Cook, Navigator and Scientist, Canberra, ANU Press, (1970)
Baron, Richard Laurence	New Technical Briefs, Sperry Corp, (1983)
Bateson, Charles	Australian Shipwrecks, Reed, (1972)
Bean, CEW	Official History of Australia in the War of 1914–18, Vol I to VI. Story of Anzac & AIF in France, Angus and Robertson, (1941–1944). Six separate books.
Bean, CEW & Gullett, HS	Official History of Australia in the War of 1914–18, Vol XII. Photographic Record of the War, Angus and Robertson, (1941–44).
Beckett, WNT	Naval Customs, Expressions, Traditions and Superstitions, A few Porstmouth, Gieves.
Berlizt, Charles	Bermuda Triangle, The England, Granada (1975), Donated by Poai PR Sinfield.
Booker, Malcolm	Last Quarter, Melbourne, Melbourne University Press, (1978).
Broome, Captain Jack	Make another signal, William Kimber, (1973).
Brown, CH	Nicholl's Seamanship and Nautical Knowledge, Glasgow Brown, Son, & Ferguson, (1952).
Burleston, Clyde W.	The Day the Bomb Fell, Longon, Sphere Books.
Butler, AG	Official History of the Australian Army Medical Services (1914–18) Vols I–III. Canberra, Australian War Memorial 1938, 40, 43. Three separate books.
Bywater, Hector C	Cruisers in Battle, Naval Cavalry Under Fire 1914–1918, London, Michael Joseph, (1969).

Callender, Sir Geoffrey & Hinsley FH	The Naval Side of British History 1485–1945, London, Christophers, (1952).
Campbell, AB	Customs and Traditions of the Royal Navy, Aldershot, Gale ? Polden, (1956), Part Facsimile.
Churchill, Sir Winston	Second World War, Vol IV — The Hinge of Fate Cassell, (1951).
Churchill, Sir Winston	Unrelenting Struggle, The Second Volume of Winston Churchill's War Speeches. Cassell, (1942), First Edition.
Clark, Joseph J & Barnes, Dwight H	Seapower and its meaning, Franklin Watts
Cooper, Bryan	The Battle of Torpedo Boats, London, Pan Books, (1972).
Couhat, L	Combat Fleets of the World
Coutat Jean Labayle	Combat Fleets of the World 1984/85, Arms and Armour Press, 1984, Donated by Mr W.T. Gudice Sept. 1985.
Cruickshank, Charles	Deception in World War II, Oxford, Oxford University Press, (1979).
Cumpston, JS	Macquarie Island, Canberra, Government Printing Office, (1968).
Cunningham, Viscount of Hyndhope	A Sailor's Odyssey, Vol II — Mediterranean to Japanese Surrender Grey Arrow, (1961), Two Volumes.
Cutlack, FM	Official History of Australia in the War of 1914–18, Vol VIII. Australian Flying Corps, Angus and Robertson, 1941–44.
Dearden, Seton	A Nest of Corsairs, John Murray, (1976).
Denham, HM	Dardanelles — A Midshipman's Diary, London, John Murray, (1981).
Domment, WE	Submarine Vessels, Whittaker, (1915).
Dowling, VADM Sir Roy	Royal Visit 1963 — Guide for Planning Canberra, Commonwealth Govt. (1962).
Dupuy, Ernest R & Trevor N	The Encyclopedia of Military History from 3500 to the Present Macdonald and Co Ltd, (1980). Donated by Mr WT Guidice September, (1985).
Eldridge, FB	A History of the Royal Australian Naval College, Melbourne, Georgian House, (1949).
Feldt, Eric	The Coastwatchers, Melbourne, Oxford University Press, (1946).
Fielding, I & O'Neill, Robert	A Select Bibliography of Australian Military History 1891–1939, Canberra, Anu Press, (1978).
Fitchett, TK	The Vanished Fleet, Rigby, (1976).
Friedman, Norman	US Destroyers, Naval Institute Press, (1982).
Friedman, Norman	US Aircraft Carriers, Naval Institute Press, (1983).
Frost, Alan	Convicts and Empire, Oxford, Oxford University Press, (1980).
Gatacre, RADM GGO	A Naval Career, Reports of Proceedings 1912–1964, Manly, Nautical Press Publications, 1982.
Geraghty, Tony	Who Dares, Wins, Arms & Armour Press
Gill, G Hermon	Royal Australian Navy 1939–42, Canberra, Australian War Memorial, (1957).
Gill, G Hermon	Royal Australian Navy 1942–45, Canberra, Australian War Memorial, (1968), Two copies.
Gillett, Ross	Warships of Australia, Rigby, 1977, Donated by Rigby.
Gillett, Ross	HMAS Melbourne 25 Years, Nautical Press, (1980).
Gullett, HS	Official History of Australia in the War of 1914–18 Vol VII. Sinai and Palestine, Angus and Robertson
Hackett, General Sir John and others	The Third World War, Sphere Books, (1979)
Hall, T	HMAS Melbourne
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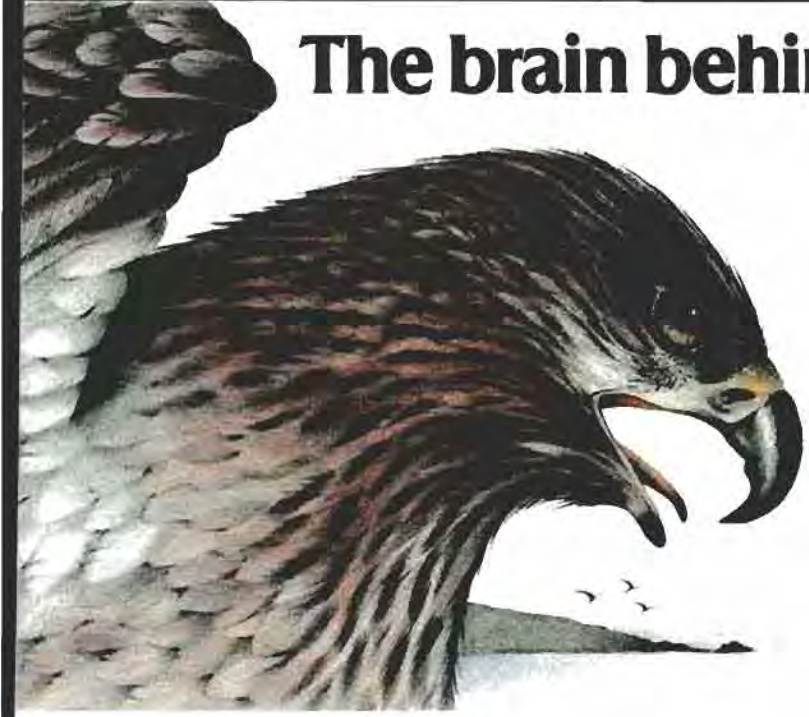

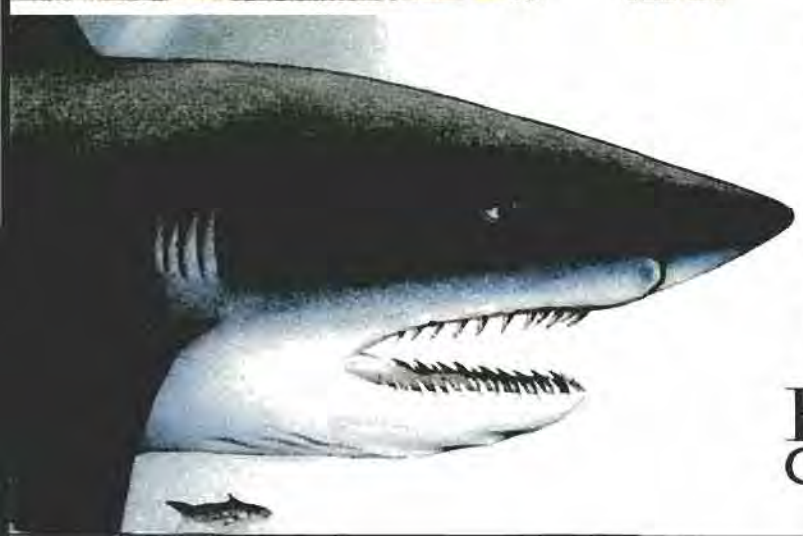

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