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JOURNAL OF THE AUSTRALIAN NAVAL INSTITUTE



AUSTRALIAN NAVAL INSTITUTE INC

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

- a. to encourage and promote the advancement of knowledge related to the Navy and the maritime profession,
- b. to provide a forum for the exchange of ideas concerning subjects related to the Navy and the maritime profession, and
- c. to publish a journal.

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

The membership of the Institute is open to:

- a. Regular Members. Regular membership is open to members of the RAN or RANR and persons who having qualified for Regular membership, subsequently leave the Service.
- b. Associate Members. Associate membership is open to all other persons not qualified to be Regular Members, who profess an interest in the aims of the Institute.
- c. Honorary Members. Honorary membership is open to persons who have made a distinguished contribution to the Navy or the maritime profession, or by past service, to the Institute.

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.

ACKNOWLEDGEMENTS

The Australian Naval Institute is grateful for the assistance provided by the corporations listed below. They are demonstrating their support for the aim of the Institute by being members of the "Friends of the Australian Naval Institute" coterie.

Australian Defence Industries
Avio Consultants
Blohm and Voss
Computer Sciences of Australia
GEC Marconi
Pacific Dunlop Batteries

Rockwell Ship Systems
Scientific Management Associates
Stanilite Electronics
Thomson Sintra Pacific
Westinghouse Electric
Krupp Atlas Elektronik (Australia)

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HIGH AND DRY

The Royal Australian Navy submarine HMAS OXLEY was slipped on the Australian Shipbuilding Industries shiplift facility at South Coogee in Western Australia on December 4, 1989 for a mid-cycle survey docking.

Seen halfway through her survey, HMAS OXLEY is due to go back in the water in late January, 1990.

HMAS OXLEY is homeported at the HMAS STIRLING fleet support facility located at Garden Island on the west coast, directly opposite Australian Shipbuilding Industries yards located opposite on the eastern side of Cockburn Sound.



FROM THE PRESIDENT



1990 will be an important year for the Institute. We need to consolidate the success of 1989 and overcome the failures. I am confident that your new Council is up to the task.

The next important function is the ANI dinner in the Wardroom at HMAS Harman on 11 May 1990. As a mark of gratitude for their generous support, the Friends of the Naval Institute will be our guests. The dinner will enable them to meet serving Naval personnel, both senior and junior, and I am planning for an appropriate after-dinner speaker.

As I explained in my address at the Annual General Meeting, the continuing success of the Friends of the Naval Institute concept is of major importance. The assistance they provide will enable the Council to raise the profile of the Institute as a professional organisation and proceed with the planning of several initiatives for later in the year.

If you would like to attend the dinner, please advise the ANI Secretary by Thursday, 26 April 1990 (see box below)

Sincerely,

Ian Callaway

ANI DINNER

**WARDROOM HMAS HARMAN
FRIDAY 11 MAY 1990. 1930 for 2000**

In honour of the Friends of the Naval Institute

Dress Blue Mess Dress for serving officers
Black Tie for others

If you wish to attend please advise
the ANI Secretary, Lieutenant Nelson
on (06) 265 3017
by Thursday 26 April 1990

Cost \$35

FROM THE EDITOR

There are several good articles in this issue, with the article by Gael Graham being printed in two parts, the initial part being containing the substantive argument. Annex II will be published in the May Issue. The 32 pica format (or normal 16 pica column) was necessary due to the detailed notes accompanying the text, (see next issue).

Dr Gael M. Graham, the author of *Military Technology for Humanitarian Ends* (see page 45) is an attorney-at-law and currently employed by International Narcotics Control Board, located in Vienna, Austria, in the role of social affairs officer. Dr Graham has wide legal experience and speaks several languages. Research for this article was funded in part by the Naval War College, Newport, Rhode Island, USA.

I would like to take this opportunity to invite the corporate sponsors to submit coloured artwork for advertising in future issues of the journal. Company press releases have been run in the journal in past issues depending on hte reference with Navy. So please forward material to me care of PO Box 80 Campbell ACT 2601.

For readers wishing to contact ANI councillors please note that Canberra phone numbers from 21 March 90 will be prefixed by the number 2. For interstate callers there will be no change as Canberra's area code is now (06).

My congratulations go to Major I.K. Lambert on being awarded the ANI silver medal. An interesting essay although I don't accept the opening sentence of the essay. My thanks to VADM M.W. Hudson and RADM D.G. Halthouse for permission to print essays entered in the 1989 Peter Mitchell prize.

Sincerely,
Don Agar

GUIDE FOR AUTHORS

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

Types of article

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

Length of Articles

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

Subdividing the Article

Three major types of headings are used:

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

Abstract

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

The Text

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

References

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

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

Photographs

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

Tables, Diagrams and Graphs

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

Copyright

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

Clearance to Publish

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

The Final Typescript

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

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

For More Information

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

COPYRIGHT DECLARATION

If your paper has not previously been published, either in whole or in part, you are asked to assign a non-exclusive licence to the Australian Naval Institute, as a condition of publication. Such assignment would not restrict you from publishing the paper elsewhere as long as acknowledgement of the original source is given. If your paper has previously been published, either in whole or in part, you are reminded that it is your responsibility to bring this to the notice of the Institute so that full acknowledgement may be made.

1. TITLE OF PAPER
2. I AM WILLING, AS A CONDITION OF PUBLICATION, TO ASSIGN A NON-EXCLUSIVE LICENCE TO REPRODUCE THE ABOVE PAPER, TO THE AUSTRALIAN NAVAL INSTITUTE.
3. THE ABOVE PAPER HAS PREVIOUSLY BEEN PUBLISHED IN
4. NAME OF PERSON RESPONSIBLE FOR CORRESPONDENCE WITH THE INSTITUTE
5. ADDRESS
6. SIGNATURE TELEPHONE NO.

AUSTRALIAN NAVAL INSTITUTE

1989 PRESIDENT'S REPORT

The objectives for 1989 were to:

- enhance the standard of the Journal;
- develop a corporate membership policy;
- promote the inaugural Vernon Parker Oration;
- promote new membership;
- decide on life membership;
- revise Chaplain Vivien Thompson's draft "History of Garden Island 1788-1922";
- support ANI Chapter activity.

These objectives have been met with varying degrees of success.

It is unfortunate that throughout 1989 the Journal was not issued on time. This problem caused the Council some distress. I intend to find an early solution to the timely production problem. In partial compensation, however, the standard of the Journal has improved throughout the year. Commencing with the August edition, authors of articles written specially for the Journal received payment of \$10 per 1000 words.

If membership fees are to be kept at reasonable levels and the quality of the Journal to be maintained, an annual additional income for the Institute of about \$10,000 is necessary. Traditionally this additional income has been derived from advertising. Despite various measures taken over recent years, income from advertising has continued to decline. One solution considered by your Council was corporate sponsorship and, after consulting with an organisation specialising in such matters, it decided to proceed in this direction.

During August I invited a few select corporations thought likely to be supportive, to become "Friends of the Naval Institute" coterie. The following corporations responded favourably:

Australian Defence Industries
Avio Consultants
Blohm and Voss
Computer Sciences of Australia

GEC Marconi
Pacific Dunlop Batteries
Rockwell Ship Systems
Scientific Management Associates
Stanilite Electronics
Thomson Sintra Pacific
Westinghouse Electric
Krupp Atlas Elektronik (Australia)

The "Friends of the Naval Institute" were welcomed by the Council and issued with their membership certificates at a function on 6 September 1989. They attended the Vernon Parker Oration delivered by Mr Beazley that evening, as the Institute's guests.

Two Vernon Parker Orations were delivered during 1989. Both were an outstanding success. On 1 May, Admiral David E. Jeremiah, Commander-in-Chief, US Pacific Fleet, spoke to the subject "The Pacific Perspective — Peace and Prosperity", and on 6 September the Minister for Defence, Mr Kim Beazley, discussed "Key Concepts in Australia's Strategy for the Development of Defence Policy". I intend that the Orations continue at the rate of one or two a year, depending on the availability of distinguished and relevant speakers.

The holding of the Orations at the Australian Defence Force Academy has provided some potential for the recruitment of new members from amongst those serving there. The efforts to recruit new members were successful to varying degrees, but it must be said that too many potential members of the Institute are content to receive some of the benefits of membership without actually becoming involved and joining. This is disappointing.

The matter of life membership was discussed during the year. Because of the decisions concerning Regular members taken during 1988, it was agreed that the need for Life membership seemed to have receded and no further action would be taken.

Only the Melbourne Chapter is active at present and 10 to 20 members meet at each quarterly meeting. These generally are at HMAS LONSDALE but once per year they are held at HMAS CERBERUS. The Chapter manages to procure a diversified selection of speakers from both the civil and Service sector, who speak to a range of nautical and defence-related topics.

Regrettably, the Sydney Chapter has suffered from the tyrannies of posting turbulence. Unfortunately, no senior officer has volunteered to replace Captain Chris Skinner as Convenor and the Chapter, despite the valiant attempts of an RANR officer, must be described as moribund. I ask those members serving in Sydney to consider getting the Chapter back into commission.

Her Naval Officer Commanding, West Australia has responded favourably to a request for his support in reestablishing the West Australian Chapter. I hope to be able to report favourably on this development next year.

Intentions for 1990

The success of the Corporate sponsorship concept is very important to the well-being of the Institute and during 1990 I intend that the "Friends":

- representatives be invited, as guests of the Institute, to the Vernon Parker Oration;
- and to the Naval Institute Mess Dinner, to be held at HMAS HARMAN on Friday, 11 May 1990;
- have free advertising space in the Journal;
- and
- be recognised in the Journal and all other institute publications.

Your Council has considered the desirability of sponsoring a seminar in the "Seapower" series during 1990. After evaluating the support for such events in the past, the success and objectives of the Vernon Parker Oration, and some ideas for an event involving the "Friends" late in the year, it is not the intention to include a "Seapower 90" Seminar in the year's program.

Although the establishment of the Vernon Parker Oration and the "Friends" coterie will be difficult initiatives to emulate on project which has been programmed is as exciting.

Your Council intends to publish a book, written by Councillor Lieutenant Tom Frame and entitled "The Garden Island". It draws on Chaplain Vivien Thompson's manuscript "History of Garden Island 1788-1922", although Tom's book will detail the development of

Garden Island as a naval ship repair and maintenance facility up to the present day.

It is intended that the book be launched on Garden Island around the time of Navy Week 1990. The Chief General Manager, Garden Island Facility, Rear Admiral Nigel Berlyn, has given his endorsement in principle for the event, which I hope will be a grand naval occasion. I will keep the membership informed as the planning develops.

The retiring Council has proposed objectives for 1990 for the consideration of the incoming Council. In summary they believe the new Council should:

- produce a professional Journal;
- further develop the "Friends of the Naval Institute" coterie;
- publish the book "The Garden Island";
- sponsor at least one Vernon Parker Oration;
- host a Nava Institute dinner;
- support Chapter activity; and
- promote new membership.

The Journal, the Oration, the "Friends" coterie and "The Garden Island" book launching will do much to promote the Institute as a professional body. I look forward to the year's activities with enthusiasm.

ANI Silver Medals

During the year ANI Silver Medals were presented to Lieutenant Commander I.B. Smith RAN for his essay titled "The Validity of the Naval Presence Mission in Support of Australian Foreign Policy"; and Major I.K. Lambert for his essay titled "Sea Power: A Credibility Factor in Australian Foreign Policy?". I congratulate both officers.

Financial Status

1989 was a very successful year financially. The injection of funds flowing from the formation of the "Friends of the Naval Institute" coterie has enabled the Council to embark upon several projects which hitherto were not possible because of the costs.

The Councillors

I wish to record my appreciation for a job well done by all Councillors during 1989. The manner with which they tackled the Oration and "Friends" initiatives was most pleasing. Their responsibilities continue to go unrecognised by most, but their public profile has increased and I hope their efforts are appreciated by the few.

Paul Reis A.A.S.A. F.T.I.A.

CERTIFIED PRACTISING ACCOUNTANT

Correspondence to:
P.O. BOX 91
WODEN, A.C.T. 2606

Telephone:
(06) 281 1566

ROOM 207
2ND FLOOR
MLC TOWER
PHILLIP, A.C.T.

21 February 1990

The President
The Australian Naval Institute Inc.
PO BOX 80
CAMPBELL A.C.T. 2601

Dear Sir

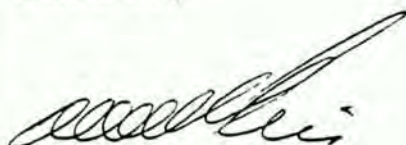
Please find attached various Operating Accounts, Income and Expenditure Account and Balance Sheet of the Institute which relate to the twelve months ended 31 December 1990.

In my opinion the attached accounts are properly drawn up so as to give true and fair view of the state of affairs of the Institute.

The rules relating to the administration of the funds of the Institute have been observed.

All information required by me has been obtained.

Yours faithfully



P.O. REIS

Paul Reis A.A.S.A. F.T.I.A.

CERTIFIED PRACTISING ACCOUNTANT

Correspondence to:
P.O. BOX 91
WODEN, A.C.T. 2606

Telephone:
(06) 281 1566

ROOM 207
2ND FLOOR
MLC TOWER
PHILLIP, A.C.T.

21 February 1990

The President
The Australian Naval Institute Inc.
PO OX 80
CAMPBELL A.C.T. 2601

Dear Sir

This letter is to confirm that I am prepared to act as Auditor of the Institute for the year ended 31 December 1990. My fee account for the year will be \$490.00.

Yours faithfully

A handwritten signature in dark ink, appearing to read 'Paul Reis', with a stylized flourish at the end.

P.O. REIS

AUSTRALIAN NAVAL INSTITUTE INC
BALANCE SHEET FOR 12 MONTHS ENDING 31 DECEMBER 1989

1988		1988
	ACCUMULATED FUNDS	
20892.47	Balance as at 1 January 1989	19871.03
-1021.44	Plus Profit for year	21287.19
<u>19871.03</u>	Balance as at 31 December 1989	<u>41158.22</u>
	Provisions for:	
300.00	Replacement Medals	300.00
400.00	Legal Fees	400.00
1080.00	Depreciation	1620.00
<u>1780.00</u>		<u>2320.00</u>
	LIABILITIES	
	Subs in Advance	
1093.00	1989	—
66.00	1990	4613.00
135.00	1991	2816.00
—	1992	25.00
6180.14	Sundry Creditors	56.00
<u>7474.14</u>		<u>7510.00</u>
<u>29125.17</u>		<u>50988.22</u>
	REPRESENTED BY	
187.59	Cash on Hand	—
3480.00	Sundry Debtors	945.00
482.44	Commonwealth Bank Chq. Acc.	944.28
20019.14	Defence Credit Union	44847.00
	Stock in Hand:	
1563.75	Insignia	1140.59
1231.25	Medals	950.35
1.00	Medal Die	1.00
2160.00	Computer at Cost	2160.00
<u>29125.17</u>		<u>50988.22</u>

**AUSTRALIAN NAVAL INSTITUTE INC
INCOME & EXPENDITURE FOR THE 12 MONTHS
ENDING 31 DECEMBER 1989**

1988	EXPENDITURE	1989
13640.82	Journal Operating Costs	12479.94
583.18	Postage	89.54
285.00	Audit Fees	340.00
4.00	Company Fees	4.00
—	Donation to Legacy	150.00
—	Donation to Naval History Seminar	200.00
166.16	Advertising — AGM	74.88
795.72	Stationery	414.29
1000.00	Honorarium	—
89.31	Bank Charges	194.61
100.00	Presentation Medals	280.90
412.00	Chapter Support	—
181.46	Entertainment	—
—	Engraving	5.00
115.83	Printing	604.52
24.74	Office Services	—
—	Video Cassettes	9.90
—	Computer Service	210.00
262.25	Insurance	183.37
23.00	PO Box Rental	24.00
540.00	Depreciation — Computer	540.00
41.50	Insignia Operating Loss	—
	Operating Profit transferred to	
	Accumulated Funds	21287.19
<u>18264.97</u>		<u>37092.14</u>
	INCOME	
44.85	Postage Received	172.00
—	Insignia Trading	118.59
130.00	Joining Fees	—
11566.00	Subscriptions	12603.00
3134.51	Interest	4283.72
75.00	Donations	459.00
18.00	AGM Sales	—
—	Corporate Sponsor Profit	19455.83
2275.17	Seapower Operating Profit	—
	Operating Loss Transferred to	
	Accumulated Funds	—
<u>1021.44</u>		<u>—</u>
<u>18264.97</u>		<u>37092.14</u>

AUSTRALIAN NAVAL INSTITUTE INC
INCOME & EXPENDITURE ACCOUNT FOR THE 12 MONTHS ENDING 31 DECEMBER 1989

**CORPORATE SPONSORS
EXPENDITURE**

	1989	1988
Commission	5500.00	
Travel	1147.00	
Accommodation	520.00	
Insignia	123.75	
Reception	544.50	
Oration	13.20	
Postage	15.72	
Certificates	180.00	

NET OPERATING PROFIT TRANSFERRED	19455.83	
	<u>27500.00</u>	

INCOME

Membership	27500.00	
	<u>27500.00</u>	

AUSTRALIAN NAVAL INSTITUTE INC
OPERATING ACCOUNTS FOR 12 MONTHS ENDING 31 DECEMBER 1989

EXPENDITURE	1989	1988	INCOME	1989	1988
Journal Operating Account					
Printing	14130.00	22827.37	Advertising		8270.00
Postage	763.30	871.34	Subscriptions	2413.36	1693.89
Prizes	—	356.00			
			NET OPERATING COST		
			TRANSFER TO		
			INC & EXP A/C	12479.94	13640.82
	<u>14893.30</u>	<u>24054.71</u>		<u>14893.30</u>	<u>24054.71</u>
Insignia Operating Account					
Stock on hand 1/1/89	1563.75	1104.25	Sales	541.75	207.00
Purchases	—	708.00	Stock 31/12/89	1140.59	1563.75
PROFIT TRANSFER TO			LOSS TRANSFER TO		
INC & EXP A/C	118.59		INC & EXP A/C		41.50
	<u>1682.34</u>	<u>1812.25</u>		<u>1682.34</u>	<u>1812.25</u>
Model Operating Account					
Stock 1/1/89	1231.25	200.00	Presentations	280.90	100.00
Medallions	—	1131.25	Stock 31/12/89	950.35	1231.25
	<u>1231.25</u>	<u>1331.25</u>		<u>1231.25</u>	<u>1331.25</u>



WASHINGTON NOTES

by

Tom Friedman

We are living through magnificent, tumultuous, breathtaking times.

Those of us who earn our living as members of, or purveyors to, the defense establishment face something of a dilemma. As human beings, we are relieved that the specter of war *seems* to be diminishing as a result of the dramatic and substantive events in Eastern Europe. But with this *apparent* diminution of the perceived military threat, our livelihoods are threatened by the military cuts that are sure to be made as soon as Congress and Parliament convene.

Because we know what a mess politicians can make of defense budgets, it is up to those in the defense establishment to take the lead in proposing which cuts shall be made. In the United States, Secretary of Defense Richard B. Cheney has ordered the Joint Chiefs of Staff to trim \$20 billion from the next budget; and even that amount may have to be increased because of the changes that have taken place since Cheney gave his orders. My candidate for the first US program cut is the B-2 Stealth, radar evading bomber.

My objection to the B-2 is three-fold: first, it is phenomenally expensive, too expensive for reduced procurement budgets to sustain; second, it lacks a mission, a reason for existence; and third, I question the technological foundation upon which the procurement of the B-2 is based.

The Air Force has yet to establish a per unit cost for the B-2. Estimates range from \$270 million to \$750 million *per aircraft*, depending upon what is calculated into the "cost" of each unit: inflation, research, spare parts, hangers, etc. The most commonly projected price is \$530 million.

Let me repeat that: **FIVE HUNDRED THIRTY MILLION DOLLARS PER AIRCRAFT!** The same amount of money can purchase some 4,200 median priced homes in the Washington,

DC metropolitan area, or fund the construction and full deployment of two FFG-7 class frigates.

A "worst case" scenario for the armed forces between Fiscal Years 1992-1994 would call for the Navy to decommission 100 ships (including all of our battleships) and to reduce the fleet to 10 to 12 carrier task forces; the Air Force to close 12 of its bases; the Army to cut its strength by 100,000 men; and the Marine Corps to reduce its manpower in direct proportion to the number of berths on the Navy's amphibious lift ships.

Such severe cuts are not beyond the realm of possibility. For its part, the Air Force has clearly failed to justify such huge expenditures on the B-2 Stealth — a piece of hardware that can be destroyed by the intake of a bird into its engine and that the Air Force admits will, for "various reasons", suffer losses through "normal attrition" in peacetime.

However, even these vast expenditures could be justified if the Air Force had successfully formulated a clear mission for the bomber. But the failure of the Air Force to accomplish this has been so profound that it has actually transformed some congressional supporters of the B-2 into opponents.

The original "mission" of the B-2 was to deliver long range nuclear payloads against Soviet command centers and mobile missile sites by *defeating the Soviet air defense system through the use of the much-vaunted stealth technology*. But the Air Force was eventually forced to concede that the technology necessary to fulfill these missions will not be available before the turn of the century. And some experts doubt that there will ever be a technology that can find and destroy mobile missile sites.

This revelation caused the Air Force to cast about for a reason to continue development

of the B-2. It has been proposed that the B-2 could perform tactical nuclear missions in Europe. Some supporters argue that the B-2 would be invaluable for its sheer deterrent effect and that its very existence would present such a threat that it would negate the Soviet Union's extensive anti-aircraft system.

Other B-2 advocates have proposed that the aircraft be used as an airborne communications post guiding other aircraft over enemy territory. But the B-2 has few radars and limited electronics so that it cannot be easily "seen" by an enemy's radar.

Defense Secretary Cheney thinks that the bomber could be used to carry out conventional attacks such as the one on Libya in April 1986 or more to the point, similar to the attack carried out by the F-117 stealth fighter during last December's intervention in Panama. Republican Senator William S. Cohen of Maine, a member of the Senate Armed Services Committee, doesn't think much of this idea. It would, the Senator says, be like sending a "Rolls Royce down into a combat zone to pick up groceries."

But even if \$530 million could be considered a bargain price and the B-2 had a set mission, serious questions remain about the technological basis used to justify the acquisition of another manned bomber.

The United States has always based its nuclear deterrence on a triad of land and sea based missiles and manned bombers. This may have been valid in the 1950's and 1960's, but missile technology has now reached the point where ICBMs can attack targets with pin-point accuracy. And keeping the manned bomber as a back-up to ICBM's that fail to function is dubious, for what one third of the triad could offer in the form of a counter-strike during a nuclear exchange is problematical.

The use of unproven technologies upon which the B-2 would be so dependent must be viewed with some suspicion in light of the continuing inability of the Air Force to perfect the B-1's capacity to perform its mission of flying under Soviet radar. It is now estimated that hundreds of million dollars more will be necessary to correct the B-1's problems and make it fully operational.

But even in more "traditional" areas, the B-2 appears inferior to its flawed predecessor. Published reports (subsequently denied by the Pentagon) state that the range of the B-2 is actually *shorter* than that of the B-1 (6,400 miles v. 6,000 miles). Furthermore, the B-2's payload is reportedly less than half that of the B-1

(56,818kg v. 22,727kg). A *lot* less "bang for the buck".

I am not opposed to stealth technology. To the contrary, it represents a major breakthrough and has unlimited potential for use in the design of cruise missiles, tactical bombers, and fighters like the F-117. But these are smaller weapons systems that, even without stealth, present smaller profiles to enemy radars. And they are not manned strategic bombers.

Any technology breeds its own counter-technology; this is particularly true in the military arena. The appearance of the *Drednought* did not force Germany to accept Britain's dominance at sea. Rather, it initiated an arms race as each side built newer and larger capital ships. Similarly, the post World War II period has seen the Soviet Union and the United States straining to match the other's missile development since starting with a similar base of German technology captured at the end of World War II.

"Stealth" technology is but the latest effort to counter the effects of radar, efforts that started almost as soon as radar was discovered. "Window", the dropping of aluminum strips to confuse German radar, was used by the American and British air forces before many bombing raids into Germany and before the landings in Normandy. Initially highly effective, the Germans eventually were able to counter many, if not all, of its effects.

Air Force planners believe that stealth technology, particularly as applied to the manned bomber, will negate the billions of dollars the Soviets spent for their massive air defense system. While this *may* be true, I strongly believe that the Soviet Union will spend any amount of money necessary to defend their country, even if it means a new air defense system.

The B-2 may be the weapons system that brings both super powers to their knees without ever being used. The American budget deficit does not need the strain of the B-2 program. And if the Soviets feel forced to rebuild their air defenses, the cost could bring about such complete economic collapse that it would spark the war we are trying to prevent.

Stealth technology merits further development and application — but not in the form of the B-2 bomber. A nation's defense depends as much on a vibrant economy as it does on the weapons it possesses. B-2 deployment would be a drain on the defense budget and the American economy that is not commensurate with the military benefit it would provide.

ANI Silver Medallion Award RANSC 22/89 SEAPOW: A CREDIBILITY FACTOR IN AUSTRALIA'S FOREIGN POLICY?

by

MAJOR I.K. LAMBERT

"... credibility is a critical ingredient in foreign policy and must exist in the minds of potential opponents, allies and the populations who bear the costs of defense. ..."

ORBIS, Fall 1982

The original reason for people gathering as communities, and nations was to facilitate defence against hostile neighbours. To coordinate the group needs for defence, it was necessary to form a government to determine official community policy in respect of their neighbours and the subsequent defence requirements. History has given weight to the premise, that the task of national defence is the primary responsibility of any government.² Palfreeman goes further to connect foreign policy and defence by stating '... the first foreign policy of any nation is survival!'³ The integrity of a nation depends on the complex processes involved in the design and prosecution of its foreign policy. It is *prima facie* that for an island nation such as Australia, seapower must play a significant role in support of the nation's defence and foreign policy.

The term seapower is used in the context of this essay, to describe Australia's ability to exert influence in peace and in war by military activities at, and over the seas.⁴ Seapower is used specifically to differentiate from maritime power which may rightfully include non-military forces. Foreign policy is taken to be a statement of the government's predetermined disposition in regard for its economy and defence, relative to other nations of the world. With recent trends towards globalism, foreign policy is also extended to include human rights issues and international issues, such as the environment and health. Foreign and defence policies are seen as a part of a single policy continuum overlapping to a degree. For the purpose of this essay it will be taken that foreign policy is essentially a peacetime governmental statement which gives way to enacted defence policy in time of hostility.

This essay will examine seapower in conjunction with the priorities given by the government to its foreign policy, and establish the ability of seapower to underpin the policy.

Force structure issues will not be considered. The aim of this essay is to determine the relative significance of seapower to the credibility of Australia's foreign policy.

FOREIGN POLICY

Origins

The formulation of foreign policy is a complex process. Input into the policy comes from the Prime Minister and his Cabinet, public opinion, media, trade officials, business interests and pressure groups like the RSL and migrant communities. Foreign policy has its seed bed in the subconscious of many, and reflects the attitude of society at that time. The current foreign policy had its origins in the 1973 election speech of Mr Gough Whitlam. It was to be a dramatic turn-around from the policies that saw Australia's involvement in Vietnam. He said:

'... A nation's foreign policy depends on striking a wise, proper and prudent balance between commitment and power. Labor will have four commitments commensurate to our power and resources; Firstly — our own national security; Secondly — a secure, united and friendly Papua New Guinea; Thirdly — achieve closer relations with our nearest and largest neighbour, Indonesia; Fourthly — promote the peace and prosperity of our neighbourhood. ...'⁵

Foreign Policy Priorities

Senator Gareth Evans, the current Minister for Foreign Affairs and Trade, has refined the Whitlam tenets. On 27 April 1989, at the Roy Milne Memorial Lecture, the Minister outlined the priorities of Australian foreign policy.⁶ Priority one was to maintain a 'positive strategic environment' in our own region. This

political jargon was directed at maintaining our physical integrity and sovereignty while at the same time promoting peace throughout the region. Senator Evans stated '... a politically unstable region is a potential threat to Australian security. ... The second priority was to pursue trade, investment and economic cooperation in its area of interest. Priority three relates to the new globalism. Australia has a contribution to make to global security through its political and economic stability in the region. Also by hosting the joint US/Australian facilities at establishments like Pine Gap, the nation helps provide for a stable nuclear deterrent. Australia is currently exploring new initiatives by way of negotiations and verification of the Chemical Weapons Convention. The final priority identified by Senator Evans surrounds the nation's contribution to what he calls 'good international citizenship'. Australia has a role in the international forums considering the global problems of AIDS, refugees, drug trafficking, and population growth.

Foreign Policy and Defence Policy

In May 1988 the Secretary for the Department of Foreign Affairs and Trade addressed the Joint Services Staff College in Canberra, and spoke of the links between foreign and defence policy. He stated in part '... we are mainly in the business of exercising influence by persuasion ... (in an attempt to make the) ... region as benign as possible, so that an adequate defence posture is an affordable one. ...'

All arms of the ADF have a role to play in underpinning the foreign policy. The Australian Regular Army force structure reflects simplicity and flexibility. Its professionalism and proficiency is shown in its selection for UN force deployments across the world. The Royal Australian Air Force has a most significant contribution to make to Australia's foreign policy in its ability to execute strategic bombing and missile attacks in what naval strategists may term 'compellence' or 'coercive diplomacy'. The Army and Air Force have a variety of lesser roles as well, which still leaves a major part on the stage for the Navy. The term 'stage' is used specifically as the Navy is arguably the best instrument to use in the politico-diplomatic posturing and gesturing that occurs in the theatre of foreign policy.

In emphasising the foreign policy role of the Navy above other services, Cable comments '... Air forces and armies, unless they have the advantages of an adjacent frontier, are cumbrous instruments, dragging a long tail behind their teeth, ill-adapted to the

tactics of tip and run, to the limited tentative, non committal probe. ...'⁸ A naval force is flexible and can be sent, withdrawn, or ordered to stand off at a moment's notice. Modern technology in communications and intelligence equipment allows political control, (some may say 'interference'), in what may be a delicate mission involving defence and foreign policy. A naval force has a visibility that other forces can either not maintain or by their very presence may be seen as a violation of another nation's sovereignty. Also the international transport medium of the sea allows navies to traverse independently, not having to cross foreign soil, showing the universality or pervasiveness of the Navy.⁹

SEAPOWERS

Function

The function of navies can be seen as threefold; a diplomatic function, a military function and a policing function.¹⁰ While the military function can be comfortably left as part of the defence policy, the policing and diplomatic roles are clearly within the ambit of a nation's foreign policy. The reason for employing the Navy in foreign policy may be to enable negotiations to be carried out from a position of strength, as occurred in 1977 when HMS ACHILLES was sent to Belize in response to a threatening attitude from Guatemala. The action thwarted any further Guatemalan action. The New Zealand frigate OTAGO was deployed into the Mururoa test site in 1973 and used to manipulate the French. It is thought to have forced the French to conduct future tests underground. The other purpose may be simply as a matter of national prestige.¹¹ The classic modern day example of a nation seeking prestige from its Navy, is the Soviet Navy with their presence in the Indian Ocean during the 1960's, 70's and 80's. This presence was part of the Soviet foreign policy to validate its superpower status.

Influence

Vice Admiral Hudson divides maritime activity into two spheres; one of influence and one of control. He adds '... if one is successful in influence then one does not need to control. ...'¹² In simple terms he states the Navy's role as a means of exerting influence. '... it is the idea of just being there. ...' Naval strategists have a more complicated view and Cable in his book 'Gunboat Diplomacy', talks of use of expressive, catalytic, definitive, and the purposeful application of force.¹³ But the

essence of this application of limited naval force is 'presence', or in Hudson's words, just being there.

Whether the Navy is inducing someone else to make a decision; using force to create a fait accompli; acting as a catalyst in events; employed to remove any ambiguity of intent by the host government, it still depends on the *presence* of the Navy.

SEAPOWERS AND FOREIGN POLICY : THE AUSTRALIAN CONTEXT

The negotiation, manipulation, and prestige functions for a Navy involved in foreign policy can be arguably more readily achieved by larger naval powers such as the USA and USSR. This does not dismiss a smaller navy (such as Australia), from achieving similar successes. The ability of the RAN, even as a medium power navy, to contribute to Australian foreign policy is enhanced through the use of technologically advanced equipment, professional commanders, and good leadership and training. The visit schedule of the RAN ships to neighbouring countries, is the perfect vehicle to display this ability. Although difficult to quantify, there is significant value in the visits of ships to foreign ports. The utility of such visits to international relationships depends largely on the attitude of the captain and crew to these duties.

In *ORBIS* (Fall 1982), Taylor and Cottrell list seven peacetime roles for a naval force in foreign policy which could be considered as subsets of the three functions already discussed. They are deterrence, denial, compellence, acquisition, intervention, counterintervention, and collective action.¹⁴ Not all of these are suited to Australia, however, they do indicate areas in which the RAN can have a role to play in the nation's foreign policy.

Deterrence. Effective deterrence is possessing sufficient strength to convince an opponent that military action would be unprofitable to him.¹⁵ (Deterrence has obvious defence policy connotations which are not considered here.) Senator Evans' priority for a positive strategic environment is dependent on the Navy providing a deterrence in such areas as the Australian Fishing Zone (AFZ). Foreign fishermen know that the RAN maintains a presence both at sea and in the air, monitoring Australia's areas of concern. The likelihood of poaching going undetected for any length of time is remote, hence the awareness of this capability deters adventurism by foreigners. Presence equates to deterrence in the instance. Should the government leave the AFZ unpatrolled this vacuum would soon

be filled. Naval presence denies the vacuum. Similarly, the policy of naval patrols in the vicinity of off-shore assets such as oil and gas rigs dissuades any foreign intervention and indicates a preparedness to defend the asset against attack.

The policing role of the Navy is probably more pronounced for the Australian Navy than for its US counterpart. As there is no coastguard force, many of the coastguard roles naturally fall to the RAN. These tasks include assisting customs authorities in the detection and apprehension of flora and fauna smugglers, drug traffickers, refugees and illegal immigrants. In foreign policy terms these roles relate to three of the four priorities outlined by the Minister.

The task of deterrence is therefore provided for, through the concept of presence and a demonstrated capability. The simple fact that Australia has a Navy, provides for an effective fleet-in-being strategy which can not be overlooked by any potential transgressor.

Denial. Denial is aimed at making an adversary abandon a course of action already undertaken. Without the cooperation of other defence and government agencies the RAN could not deny access to the Australian coast. The cost of maintaining a Navy to carry out such a task independently, would be prohibitive. Therefore the denial aspects of foreign policy rely on the combination of assets such as Over The Horizon Radar, P3C Patrol aircraft, merchant shipping and RAN patrols, to direct priority of effort of the 'denial force'. The fact priorities need to be allocated, infers that not all targets can be prosecuted. This is reality.

Compellence. This role largely belongs with Cable's 'Gunboat Diplomacy' when he speaks of it as a '... weapon of the strong against the weak, (with strength measured) ... by the ability to apply appropriate force about the point in issue.' ¹⁶ Compellence is a progression from deterrence in that any force may act as a deterrence in that any force may act as a deterrent however compellence presupposes an ability to take action should the transgressor not heed the show of force. In this regard the RAN can apprehend ships violating Australian declared waters. But the nature of the craft carrying out these missions limits their possible 'targets' to fishing boats and merchant ships — all unarmed. Nevertheless, the Navy has the ability, in peace, to protect the sovereignty of the nation, which is a stated foreign policy aim.

Intervention and Counterintervention. This naval role may be to stabilise a preferred regime, topple a hostile government or conversely, to prevent such attempts. For this to

be relevant to Australian foreign policy differentiation would need to be made between internal intervention and intervention from external powers. Australia is adamant that it will not meddle in other nations' affairs. Hence, regardless of what message the presence of Australian ships in Fiji telegraphed, during the 1987 coups, the Government had no intention of intervention, in what it saw as an internal dispute.

Collective Action. International organisations such as regional or UN forces may become part of the nation's foreign policy. It is apparent that the current Australian Government enjoys its role in the international forum and it is conceivable that like the Army, Navy forces may be committed to UN roles of surveillance and peace-keeping. Disregarding current force structure the RAN has the professional expertise to be employed in such a force bringing prestige to Australia as well as 'operational' experience to its personnel. This would be in keeping with the foreign policy objective of being a good international citizen and also in assisting the promotion of world peace.

Now that Indonesia and Australia have reached an historic agreement to share areas of natural resources in the Timor Gap off the North West Coast, there will be a need for a regional combined force, or collective action, to patrol the area which will possibly be the most sensitive of all current defence involvement in foreign policy. Yet another area of foreign policy implementation that could only be performed by the RAN.

Acquisition. At the onset it was stated that foreign policy was that part of the policy continuum that was relevant during peace. Acquisition involves the seizing of land or resources for exploitation or bargaining purposes. In peacetime this action is not seen as being politically expedient in the national, regional, or international sense. Acquisition may be a feasible option for Australia at war but not as part of the peacetime foreign policy agenda.

Assistance. Taylor and Cottrell's seven peacetime roles fail to cover that kind of task which embraces aid to the international civil community, eg, natural disaster relief. The show of good will and non-patronising aid support in times of natural disaster, is a vital part of Australia's foreign policy. It provides an opportunity to show that the nation's stated intentions are realistic and will be honoured. Similarly, hydrographic survey tasks carried out in neighbouring waters provide valuable information to the host nation for future maritime activity. Only the RAN has the

expertise to carry out such tasking. These acts of aid and assistance demonstrate the honourable intention of the Government's foreign policy.

Intelligence. Another less obvious role of the Navy in Australian foreign policy, is that of providing intelligence. If we seek to promote peace and stability in the area, then the observation of foreign ship movement, illegal fishing, possible EW tasks, and recording of port harbour developments all add to make a more comprehensive intelligence picture for the government and ADF. Some intelligence may in fact contribute to global security, with the most significant contributor being the submarine force. The ability to monitor, and report on foreign navy ship movement helps justify our alliances and increases the interdependence of Western Navies.

CONCLUSION

The concept of having a foreign policy without a defence force is anathema. The policy would be meaningless. Codes, treaties, agreements, policies, conventions and laws do not on their own, prevent the occurrence of undesired behaviour. They merely provide a benchmark against which we can measure transgressions and telegraph our response. Having provided the benchmark, the need is for an invigilator. Our foreign policy details Australia's benchmark to the rest of the world, and our Navy provides the invigilator. At various points along the foreign/defence policy continuum the individual services of the ADF have tasks to underpin the policies. The generally aggressive and unfettered violence unleashed by the Air Force and the Army, can not compare with the subtleties that the Navy can offer through presence, manipulation, shows of force, and prestige. In the vernacular, it is 'horses for courses'. Without the Navy, Australia's foreign policy would lack that crucial ingredient — credibility!

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Sikorsky Sea Hawk and a rolling deck.

THE NAVAL HELICOPTER IN AUSTRALIA

by

Captain F.R. McMillan RAN (rtd)

While fixed wing aircraft developed rapidly during the early years of this century, it was not until September, 1939 that Igor Sikorsky demonstrated that helicopter flight was feasible. Unfortunately, design problems delayed entry of the helicopter into World War II until very late, robbing it of the development impetus given to military fixed wing aircraft during the war years.

However, use of the Sikorsky R4 by the United States Coastguard in a number of well publicised rescues ensured a major concentration of design resources on helicopter development in the immediate post war period. This foresight paid off in Korea where the helicopter's outstanding value for rapid deployment of troops, artillery spotting and evacuation of wounded confirmed its place in the military inventory.

Australia's first moves

Historically, the Royal Australian Navy was quick to appreciate the significance of the helicopter for navies structured on the aircraft carrier task group. At the time of the Korean War, the RAN possessed two aircraft carriers, "Sydney" and "Vengeance", both equipped with piston engined fighters and anti-submarine fixed wing aircraft. Operating with United States and Royal Navy ships in the China Seas demonstrated to the RAN the value of the helicopter for planeguard duties,

plucking downed aircrew from crash sites on land and from accidental sea landings. Another significant benefit was the immense time saving achieved in personnel and store transfers at sea compared to the arduous small boat routines previously employed.

In 1952 the RAN took delivery of its first helicopter, the Bristol Sycamore, a small piston engined design with a tricycle landing gear. Although difficult to fly and dogged by engine problems, the Sycamore performed valuable service in the RAN, establishing the place of the helicopter in Australian naval aviation.

Maritime Specifications

From the early '50s onwards two maritime helicopter specifications were to develop in parallel within the RAN; the first for a utility helicopter along the lines of the Sycamore, for training aircrew, planeguard and transportation duties; the second for a larger helicopter capable of carrying equipment and weapons suitable for locating and attacking submarines.

ASW

The main detection sensor employed against submarines is sonar, an underwater listening device. In simple terms a fleet at sea under submarine threat needs a distant listening barrier to detect submarines entering the area into which it is proceeding. Closer to the fleet

THE AUTHOR

Captain McMillan entered the Royal Navy Volunteer Reserve as a Midshipman during the second World War and completed his engineering training at RNEC Keyham. He was demobilized in 1947 and joined Saunders-Roe as a test engineer on the Princess flying boat programme prior to returning to naval service with the RAN in 1950. Subsequent postings included marine engineering duties in HMAS Australia, Melbourne and Vendetta and air engineering duties with 816 Squadron and HMAS Sydney, Melbourne and Albatross. Captain McMillan was project manager in the UK for the original Sea King Helicopter and simulator acquisitions and undertook several other overseas evaluations on behalf of the RAN. His final posting before retirement in 1979 was as Director of the Naval Aircraft Engineering Branch.

a local area sensing device is required, initially to target and then to control attacks against those submarines which have penetrated the outer barrier. Fixed wing aircraft are usually employed to provide the outer defence by dropping miniature sonar sets (sonobuoys) in the water and measuring detection signals broadcast by the sonobuoy. Prior to the ASW helicopter, local sensors were confined to hull mounted sonars in fleet escort ships. The ASW helicopter introduced a new capability, carrying the sonar transducer on the end of a winch cable and "dunking" it at rapidly changing locations to listen for submarines.

The first RAN anti-submarine helicopter was the Westland Wessex, a single gas turbine engined six tonne British helicopter developed from a Sikorsky piston engined design. Its longevity has been remarkable, introduced in 1962 and currently being retired some 27 years later.

During the in-service life of the Wessex with the RAN the design and manufacture of specialised ASW helicopters for the most part devolved upon two companies, Sikorsky in the United States and Westland in Britain. Consequently, in 1975, when the RAN needed to acquire its next generation of ASW helicopters, it selected the Westland Sea King — a large, twin gas turbinised ten tonne helicopter with dunking sonar and an extended range compared to the Wessex.

Utility

On the utility front the Sycamore gave way to the US Army developed Bell Iroquois, a single gas turbine engined helicopter. This choice involved the RAN in a new departure, a skid configured landing gear rather than the wheeled undercarriage of its previous helicopters. The Iroquois was a joint purchase with the RAAF and became the training and transportation workhorse for the Navy, but was not used extensively at sea because of its "teetering" rotor and skid landing gear. The purchase was an early example of the problems encountered from acquiring similar aircraft, on grounds of economy, to meet widely disparate operating conditions.

A word may be needed here to explain the problems of flying off and landing on a ship at sea. Although all helicopters have excellent forward visibility and in smooth sea states have little difficulty in following ship motion, the severe ship roll rates experienced with higher seas require a precise and rapid flight control response combined with the greater safety and stability of a wheeled undercarriage. The margin for error is obviously less if the helicopter is operating from a small ship rather

than the comparative spaciousness of an aircraft carrier deck.

ASW for a fleet without carriers

Small ship helicopter operations became of increasing importance to the RAN when it was denied replacements for its two aircraft carriers and in 1983, the whole of its fixed wing element was disbanded. The only solution, admittedly less than satisfactory, was to provide fleet submarine screening from individual helicopters carried on small ships, replacing the integrated carrier based fixed wing/helicopter mix. This generated the requirement for long range sonobuoy carrying helicopters to replace the fixed wing ASW component. This new helicopter was destined for the recently acquired US designed FFG-7 frigates, the only operational RAN ships fitted with a flight deck. Although the Sea King was capable of modification to carry sonobuoys, this could only be achieved by removal of its dunking sonar equipment. The overall height and width of the Sea King would also have necessitated modifications to the FFG hangar and flight deck.

Prior to the decision to abandon the RAN's fixed wing aviation capability, specification of the FFG helicopter was driven by the need to acquire over-the-horizon targeting (ASST) capability for the ship's main armament — Harpoon guided missiles. Probable the most suitable helicopter on offer was the Westland Navy Lynx a five tonne twin gas turbine wheeled undercarriage design which had proven itself in the Falklands campaign in a similar role. However, addition of the ASW operational requirement to the FFG designated helicopter drove the space and weight parameters well beyond this size. The RAN dismissed counter arguments that since the FFG hangarage was designed to accept two helicopters it would be both cost and operationally effective to embark two smaller helicopters, one configured for search and the other for attack.

Instead, the Sikorsky S-70B-2 Sea Hawk, a ten tonne twin turbine, wheeled USN design was chosen to equip the FFG. Unfortunately for the RAN, United States' naval philosophy requires submarine defence to be controlled locally by the ship commander, with most helicopter derived detection information data linked back to the parent ship for analysis.

As RAN and RN practice is to give much greater autonomy to the senior airborne tactical operator, the electronic suite in the Sea Hawk had to be altered to a locally specified design embracing on-board analysis. This defeats one of the primary reasons given for



Super Lynx is the latest Westland Navy Lynx, NATTO's standard light ship-borne helicopter. A 'chin-mounted' 360° radar and advanced dipping sonar enable Super Lynx to detect, localise and prosecute targets up to 100 miles from the fleet, operating autonomously in any weather, night and day. Super Lynx has Rolls-Royce Gem 42 engines, a new high-efficiency tail rotor, optional composite swept-tip main rotor blades, and advanced mission avionics based on a central tactical system.



Westland Sea King in Australian colours.

choosing the Sea Hawk, its commonality with the USN.

These changes have resulted in extensive programme delays and the first Sea Hawk has only just been handed over to the RAN (18 months late) with its re-designed electronics

apparently still not fully functioning. Costs have escalated to the point where price of Sea Hawk is now expected to exceed \$40 million per in-service unit, plus another large bill for structural modification to three of the early FFG-7s. Still worse from the RAN's point of

view, is that even when fully operational, Sea Hawk will not fill the gap in dunking sonar capability in the absence of a fleet platform to carry the Sea King helicopter. To provide an adequate ASW operational force as well as to maintain training standards for aircrew, ships, and its own submarine force the navy needs six ASW Sea Kings at sea simultaneously with the Sea Hawks.

New Generation

For the next decade, the USN is committed to two weight dictated sizes of helicopter for the frigate end of its fleet; the 6 tonne Kaman Seasprite and the 10 tonne Sikorsky Sea Hawk. The Royal Navy, on the other hand, has its next generation plans in place with the 5½ tonne Westland Mk 8 Navy Lynx and the 15 tonne Westland/Agusta EH101 well into its development programme.

For larger fleet ships, the RN choice of the 15 tonne joint British Italian EH101 for its next generation ASW size had been driven by a perceived NATO need for at least five hours on task carrying four homing torpedoes. This philosophy has been supported by the Canadian Navy's selection of the EH101 as its primary ASW helicopter, no USN aircraft having been considered suitable.

For smaller ships, Super Lynx (the export version of the Mk 8 Navy Lynx) is large enough to carry both anti-ship and local anti-submarine sensors and has a combat proven airborne missile attack capability (a function still lacking in Sea Hawk). The emergence of second generation "smart" anti-ship missiles capable of "fire and forget" from relatively small helicopters has put a significant tactical weapon in the hands of local action commanders, considering these missiles can take out a heavily armed patrol boat or cause major damage to a ship of frigate or destroyer size.

ANZAC Frigate

Looking to the future, the ANZAC Frigate programme will put a new generation of helicopter carrying ships in the water. The cost of Sea Hawk has made it prohibitive for these new ships. Moreover, it is doubtful whether a "second tier" ship operating in a patrol, surveillance and protection role needs more of the capability offered by the 16 Sea Hawks already ordered.

Turning back to the utility helicopter for a moment, the RAN has recently been saddled with another RAAF choice in the name of commonality. This is the French Aerospatiale Squirrel training helicopter, a light construction skid equipped civil variant.

Some elements in the Department of Defence see the opportunity to muddy the waters in the ANZAC Frigate helicopter choice by pushing for the purchase of additional, cheap Squirrels, justified by the specious argument that this helicopter has been used on the FFG pending the arrival of the Sea Hawk. This argument is nonsense. The Squirrel is too small to carry any significant sensor equipment, is not strengthened to meet arduous maritime conditions and its skid undercarriage precludes its use on small ships except in calm seas. Its interim role on the FFG has done little to extend the ship's operational capability (although it may have improved morale by the more rapid distribution of mail around the fleet!)

A Way Ahead

To the outside observer, it appears the RAN is facing a number of self-imposed problems in arriving at a sensible helicopter mix in support of the future fleet. Although it is committed to the 10 tonne weight size as its major element, it still has to get the Sea Hawk working effectively from the FFG deck and this must be its first priority. However, almost as important, it needs to rebuild its inventory of Sea Kings up to at least 12 and take six of them to sea regularly on some form of flat deck ship (possibly a modified logistics ship or merchantman). This is essential if the RAN is to retain its full ASW expertise and to develop and expand its own submarine operational skills.

In parallel with these programmes, the RAN should already be pressing the case for a rugged yet agile, twin engined 5 to 6 tonne wheeled helicopter for the ANZAC frigate. This would fill a serious lack in local area defence and, assuming the specification is written sensibly to include alternate fits of anti-surface-ship and anti-submarine sensors and airborne weapons, provide the Navy with a helicopter matched to the capability and task of the ANZAC frigates, neatly filling the Sea Hawk/Sea King capability gap.

The New Zealand Navy has already indicated this is the type of next generation frigate helicopter it is looking for to replace its aging Westland Wasps. Since the demise of its aircraft carriers the RAN seems to have lost its way and to be attempting to meet all its airborne operational requirements with one helicopter type, a patent impossibility. The ANZAC Frigate programme may give it the opportunity to diversify and, more importantly, to meet its overall task more effectively and at a lower cost.

SINGAPORE AND AUSTRALIAN NAVAL POLICY, 1919-40

by

Ray Jones

Singapore's prominence in British Imperial strategy before 1939 is well known and the intention to send a Royal Navy battle-fleet to Singapore in the event of war with Japan was public knowledge. Australian governments also acknowledged Singapore's importance but were reticent about plans for Australian participation in Singapore operations. Despite government silence on the subject, Singapore dominated Australian naval planning between the world wars and, for some years in the 1930s, the RAN's main strength was earmarked to go to Singapore on the outbreak of war.

The Singapore strategy was devised by the British government after the First World War as a means of re-establishing British naval supremacy in South-East Asia and the Pacific. This supremacy would be exercised by a battle-fleet large enough to overwhelm any likely enemy fleet and so designed that it would be larger than the expected enemy naval force.

One of the earliest formal proposals for this British fleet was contained in the 1919 Jellicoe Recommendations to Australia which proposed a British Eastern Fleet of eight battleships and eight battle-cruisers, plus the necessary cruisers, destroyers, aircraft carriers and minesweepers, to protect British interests in South-East Asia.¹ Jellicoe's naval career had culminated in service as First Sea Lord after commanding the British Grand Fleet during the First World War; his practical warfare experience and deep involvement in naval planning indicate that Jellicoe's proposed naval force represented the strength, by contemporary standards, needed to face the Imperial Japanese Navy.

Regardless of theoretical merit in any plan to station a large British fleet in South-East Asia, it was not practical. Post-war economies had led the Admiralty to reduce the number of battleships in full commission and there were no longer enough in service to provide fleets

in European waters and in the Far East. Many battleships had been placed in a reserve status from which they could be bought forward to full commission at the outbreak of war but they were not available for peacetime deployment. Any British Eastern Fleet could only be established at the expense of naval strength in European waters.²

In addition to these problems of ship availability, there were significant practical problems in basing a fleet in South-East Asia. Support facilities for capital ships, established when Royal Navy battleships were stationed in the region well before the First World War, had been outgrown by newer generations of battleships and battle-cruisers and there were no longer dry-docks in South-East Asia large enough to hold newer classes of capital ships during essential maintenance. Furthermore, modern capital ships used oil fuel instead of coal. A fleet needed thousands of tonnes of oil for regular operations but the South-East Asia region was entirely bereft of naval oil fuel stocks. It was not a matter of inadequate oil supplies held in the region; there were **no** naval fuel oil stocks.

To overcome these basing problems, the British government decided to build a naval base at Singapore to support the fleet exercising British naval power in the region. At the outset, the base was not primarily directed against Japan but grew from the traditional British wish to exercise naval power where she had maritime possessions and interests.³ Of course, the Imperial Japanese Navy, as the largest navy in South-East Asia, was an important potential enemy for British planners who also had to take account of an Australian conviction that Japan was a threat.

Announcing the Singapore plan just before the 1923 Imperial Conference effectively forestalled criticism from the British Empire about the lack of Imperial defence capacity in

the Pacific and Indian Oceans. It is typical of the whole Singapore story that an unpublicised rider to the decision to build the base was that minimum expenditure would be incurred for the first two years. Thus the British Government could bask in the Empire's praise resulting from the announcement to build the base while deferring domestic odium attached to substantial overseas spending.

In early 1924, after Australia's delegation returned from the Imperial conference, the government led by S.M. Bruce announced a five year Defence Equipment Programme intended to correct some of the deficiencies in Australia's defence capability which had deteriorated sharply since the First World War. Bruce had no doubt that Australia's defence was primarily a naval problem but he also believed that the task of naval defence was so great that Australia could not handle it alone so must continue to rely on the British Empire and this presented a problem. As he explained; "the question of the naval strength of the Empire is of the most vital importance to us. We are a very long way from Great Britain, and we have evidence from time to time that the people of Britain do not fully realize the position of Australia, and its value to the Empire. It is quite possible that in Britain, hard pressed as she is with the war burden, a short-sighted vision may be taken of the problem of Empire defence, and expenditure may be concentrated upon the immediate defence of Britain to the detriment of the outlying parts of the Empire."⁴

Bruce saw a need to ensure that Britain continued to accept responsibility for Imperial defence while Australia took appropriate action in case the British government abandoned the Empire.

The 1924 Defence Equipment Programme represented Bruce's attempt to deal with this dilemma. The major items in the Equipment Programme were two 10,000 ton cruisers armed with 8-inch guns,⁵ two O-class ocean-going submarines (intended to be the beginning of a six submarine flotilla) and the construction and fitting of fuel-oil tanks at Darwin and Sydney. Bruce stressed the local defence ability of the new ships and described the programme as implementing the resolution of the 1923 Imperial Conference confirming "...the primary responsibility of each portion of the Empire ... for its own local defence."⁶ but the naval items dominating the programme followed Admiralty guidance and were as suitable for a navy designed to suit Admiralty plans as to a local defence navy.

Between 1924 and 1928 the RAN concentrated on the huge task of absorbing these

large, modern cruisers into a navy otherwise equipped with obsolescent light cruisers carrying far from modern guns. The immensity of the training task prompted the Naval Board to direct the Commodore Commanding the Australian Fleet⁷, at the end of 1925, that the entire RAN was to be regarded as a training squadron until the heavy cruisers commissioned.⁸

While the Australian navy prepared for these capable ships there was little real progress with the Singapore base. The new British Prime Minister (Labour's Ramsay MacDonald) had suspended action on the base in 1924 as evidence of Britain's good faith in disarmament negotiations; a Conservative government soon re-instated the plan but a year had been lost. Subsequent planning progress was slow and in 1925, as the Ten-Year Rule (that Britain's armed services should not plan for major war within ten years) imposed its deadening hand on British defence spending, comprehensive early plans were scaled down to installing a floating-dock and establishing fuel-oil stocks at the naval base site while relying on commercial repair facilities on the southern side of the island. Deferring works on armament depots and base defences meant that Singapore could not support the Main Fleet and the original plan was being undermined.⁹

It is important to realise that the Singapore plan had three elements. First was the naval base with engineering facilities, ammunition depots, stores and fuel-oil tanks on a scale meeting the requirements of a battle-fleet. The second, complementary, part of the plan was to install defences sufficient to keep Japanese forces away from this base until the British fleet arrived from European waters to take up station at Singapore. The third component was this fleet, known as the 'Main Fleet' or 'Main Force' which, based at Singapore, would exercise British maritime power in the region. Without the fleet the base was useless but the fleet could not operate without the base.

The ability to hold Singapore until the Main Fleet arrived was fundamental to the strategy. British planners assessed that the Imperial Japanese Navy would consider capturing Singapore before the Main Fleet arrived to be a pre-requisite for Japanese success in war and would, consequently, be prepared to risk damage to capital ships in achieving this aim. The belief that Japan would place a high priority on quickly capturing (or neutralising) Singapore prompted Britain to plan for defences powerful enough to drive away battleships.

Watering down these plans in the mid-1920s emasculated the Singapore strategy, but the

idea of Singapore as a powerful base defending British interests in South-East Asia was acquiring its own intellectual momentum independent of facts and nobody outside the Admiralty appears to have been particularly concerned.

The floating dock, built in Britain and towed to Singapore in two parts, was officially opened on 14 August 1929.¹⁰ By then, there were three quarters of a million tons of oil in storage. Base defences comprised to regular infantry battalions, twelve torpedo-bombers and five flying boats.¹¹ The Admiralty had intended to send a battle-cruiser squadron to Singapore once the floating-dock was in place but the plans was abandoned in 1928 because of the placid political situation in the Far East. As well, a policy introduced by Admiral Beatty in 1924 which had the Mediterranean Fleet earmarked as the Main Fleet to relieve Singapore was relaxed in 1929 (after Beatty retired) because war then appeared unlikely.¹²

In this generally calm international setting the two new RAN heavy cruisers arrived in Australia. The cruisers were expected to deploy in Australian waters at the outbreak of war and patrol between Darwin and Java denying passage through those waters to individual Japanese warships intent on attacking merchant ships. The seaplane carrier would be stationed in Apsley Strait (between Melville and Bathurst Islands) sending aircraft on reconnaissance between Java and Darwin finding enemy ships for the cruisers to deal with. The older 6-inch cruisers (HMA ships *Adelaide* and *Brisbane*) were in reserve but had war stations defending maritime trade in southern Australian waters (the Tasman Sea and Cape Leeuwin area) where they were less likely to meet superior forces.¹³

This naval war plan assumed that the Main Fleet at Singapore would dominate South-East Asian waters and protect Australia from the Japanese fleet; the RAN was only expected to deal with raiders which had slipped past the Royal Navy. Despite thus relying on Singapore, Australia refused to contribute financially towards the base. New Zealand, Hong Kong and the Federated Malay States had given money while the Straits Settlement had made land available but Australia had chosen to put its money into warships then had retained those ships near Australia. By 1930, when very little progress had been made with the permanent facilities at Singapore, Australia seems to have had the better arrangement.

The 1930 Imperial Conference shared the prevailing belief in continuing peace, which had already led to considerable delay, and agreed that work on the Singapore base could

be suspended for the next five years. The British Labour Government had carefully considered abandoning the base completely but cancellation costs, including the refund of Empire contributions, were higher than continued construction so the plan remained in existence but with minimum continuing expenditure.¹⁴

British complacency was badly shaken in September 1931 when the Japanese Army invaded Manchuria. Realisation began to dawn in London that Japan was prepared to use force to achieve foreign policy objectives and that British interests in China and South-East Asia could not be protected from Japanese aggression while the Singapore naval base was incomplete. Work on the base had not yet reached the stage at which a naval force of any consequence could be based there and defences were inadequate. An argument between Admiralty and Air Ministry over whether defences should rely on big guns or on land-based aircraft had been allowed to drag on as an excuse for doing anything.¹⁵

The Shanghai Crisis in early 1932, coming so soon after Japanese aggression in Manchuria, emphasised Japan's willingness to use force and the British Cabinet accepted the Chiefs of Staff recommendation that work on Singapore should resume. In March 1932 the Ten-Year Rule was formally abandoned¹⁶ and the squabble over defences for Singapore ended with the decision to rely on guns.

Even before Japan invaded Manchuria, the Admiralty had been considering ways to enhance naval strength at Singapore and suggested greater RAN involvement to the Australian Naval Board; the Board agreed to assign Australia's two new 8-inch cruisers to Singapore as their war station. The Admiralty usually assigned forces to Commanders-in-Chief and left them to employ ships as circumstances required but, on this occasion, London advised that Australian cruisers (and Royal Navy cruisers from New Zealand) would be tasked with defending lines of communications between Singapore and Hong Kong after the Main Fleet had reached Singapore. The Admiralty expected that political objections, especially the potential provocation of warships taking up war stations in a time of tension, would probably prevent Australian cruisers reaching Singapore before the Main Fleet. Planners anticipated that China Station cruisers would have to perform the necessary tasks unaided but welcomed the assistance of RAN cruisers at Singapore as soon as possible.¹⁷

The seaplane carrier, HMAS *Albatross*, escorted by the destroyer flotilla, was also

assigned to Singapore to operate in Malacca Strait using her aircraft to find Japanese mines or submarines and relying on the destroyers for offensive operations.¹⁸ This was not a superficial task; a Royal Navy exercise in the Mediterranean in 1925 simulating passage of Malacca Strait by the Main Fleet bound for Singapore had led to the conclusion that the Fleet was gravely vulnerable to mines, submarines and aircraft while passing through Malacca Strait.¹⁹

The Australian cruisers, seaplane carrier and destroyers earmarked for Singapore comprised the entire mobilised front line strength of the RAN. Despatching all of the navy to Singapore was a deliberate expression of confidence in the Singapore strategy and represented a divergence from Bruce's implied dual aim of encouraging Britain to defend the Empire while making preparations for local defence. Now all thought of local defence was abandoned. The 1934 War Instructions for Commanding Officers stressed the wholehearted adoption of Imperial strategy with the statement that "...The general strategy to be employed in the event of a war with JAPAN ... is that of a concentration of the available and effective RAN units at the earliest possible moment with C-in-C, Eastern Fleet..."²⁰ A staff officer in Navy Office, had written in 1931 that "...By despatching her best ships to Singapore to assist in rendering that base secure for the Main Fleet, Australia would be contributing directly towards her own security, and would be employing her naval forces to the best advantage..."²¹

This naval confidence in the Singapore plan was not shared by Australian Army Officers who believed that Britain could not be trusted to send a fleet to Singapore in time of need and recommended that Australia prepare to meet a Japanese invasion. The Australian Labor Party, when not in government, also opposed the policy of supporting British Imperial plans but the Scullin Labor government kept the two heavy cruisers in commission as potential contributions to British naval strength and did not implement the submarine and aircraft defence policy which the party espoused in opposition. Army opposition to Singapore was more consistent and senior officers persistently expressed grave reservations at Australia's policy of co-operation with Britain.²²

Prime Minister Joseph Lyons tried to reconcile the differences between Navy and Army with a report from a senior officer selected by London. But the British government recognised that British officers had been polarised by inter-service squabbling and that

a uniformed adviser from Britain would add to the discord by supporting his sister service in Australia. Lyons then sought a civilian defence adviser and Sir Maurice Hankey, Secretary to the Cabinet and to the Committee of Imperial Defence, was invited to attend Victoria's Centenary celebrations in 1934.

Hankey was a confirmed supporter of the Empire and a tireless worker for Imperial co-operation in defence matters. In Australia he met government ministers and opposition leaders and had six meetings with the Committee of Defence in October and November 1934 during which he spoke against adopting the Army as the primary means of national defence. In his report to the Australian Government, Hankey argued strongly that there was no real invasion threat to Australia and that, by 1936, the first stage of Singapore's defences would be completed and the likelihood that a powerful British fleet would be based in South-East Asia in wartime must deter Japan from naval expansion.²³

Hankey's visit helped keep Imperial naval defence as the main element in Australian defence policy, and reduced the probability that Australia would concentrate on defence against invasion. The Army would not be allowed to expand into an invasion deterrence force but would concentrate on coastal defences. The Minister's 1935-36 Defence Statement to the Parliament spelt out the parts to be played by the services in the defence programme. The Navy was intended to be "...an effective and fair contribution to Empire Naval Defence..." while the Coast Defences..." and the "...armament and equipment of the units allotted for the support of the Coast Defences..."²⁴

Planning for the RAN to be this contribution to Imperial defence assumed that the Australian government would formally assign the RAN to Admiralty control, but Australia had not been as co-operative as Britain wished and there were doubts in London concerning naval integration. Australian governments, of all political persuasion between 1919 and 1939, rejected proposals for automatic transfer of Australian ships to Admiralty control in wartime and British naval planners could not prepare firm plans for RAN warships. Although the Australian Naval Board expected that the RAN would integrate with the Royal Navy at Singapore, this expectation lacked overt political backing; Hankey is reported as referring only to Australian acceptance of the Imperial strategy in general and Australian ministers made equally broad comments about Australia's naval policy. No politician mentioned RAN plans to go to Singapore, nor that

those plans had been consolidated at the 1934 Singapore Conference.

This conference of Flag Officers was called by the British government, at the suggestion of the Commander-in-Chief, China (Sir Frederick Dreyer), to co-ordinate naval war orders of the China, East Indies, Australia and New Zealand Stations.²⁵ Vice-Admiral Sir George Hyde, First Naval Member of the Naval Board, represented Australia. The conference agreed with Admiralty plans for Singapore operations and paid careful attention to the best routes to Singapore for Australian ships and for British cruisers from New Zealand. The Naval Board had already suggested, and the Admiralty had agreed, that RAN cruisers should plan to sail via Fremantle to Singapore from Sydney or southern Australia because warships at Fremantle should not be seen as threatening Japanese territory (as warships sailing via Torres Strait or north of New Guinea could be). Furthermore, cruisers at Fremantle could join the East Indies Squadron in the Indian Ocean if circumstances required a fighting advance to Singapore.²⁶

The Conference endorsed the Australian plan to send cruisers, destroyers and seaplane carrier (i.e. the entire effective Australian naval strength) to Singapore and recommended that *Albatross*, then in reserve for financial reasons, should be re-commission as soon as suitable aircraft were available and spend about three months of every year with the China Squadron becoming acclimatised to conditions around Singapore.²⁷ Hyde passed this recommendation to the Australian Minister for Defence (Sir Archdale Parkhill) who asked the Defence Council to nominate an item in the existing defence programme for cancellation to make money available. Nothing could be found and the Lyons government would not increase defence expenditure in 1935.²⁸ The Australian government's refusal to increase defence spending at a time when the British Government was becoming increasingly alarmed at the Empire's weakness was one of many difficulties confronting the Admiralty as international stability deteriorated.

The Abyssinian crisis in 1936 crystallised these problems when the Admiralty had to face the probability of naval war against Italy. While there was absolute certainty in London that the Royal Navy would defeat the Italian Navy, there was equal certainty that some British ships would be sunk or damaged in action and a depleted Royal Navy would be even less able to maintain sufficient strength in Europe to protect British interests there, while sending the Main Fleet to Singapore.²⁹

Admiralty concerns were a little relieved by Australia's loyal support during the Abyssinian crisis. *Australia*, the heavy cruiser on exchange service with the Royal Navy, was sent to the Mediterranean ready for action against Italy if war came. The light cruiser, HMAS *Sydney*, newly commissioned in Britain, was handed over to Admiralty control and joined *Australia* in the Mediterranean. The Australian Squadron, including HMS *Sussex* (a heavy cruiser on exchange service with the RAN) gathered in Darwin ready to go to the Red Sea where it was expected to destroy Italian naval forces in war.³⁰

The Abyssinian crisis passed without naval action. *Sussex* reverted to Royal Navy service, *Australia* and *Sydney* returned to Australia, and cruiser exchange was suspended indefinitely. Growing Admiralty doubts about the possibility of executing the Singapore policy were kept from Australia and RAN War Orders re-issued in March 1936 confirmed the Australian intention to re-inforce Singapore.³¹ When *Sydney* reached Australia she was assigned to Force W (with *Australia* and *Canberra*) earmarked to join British forces at Singapore. Reserve ammunition for the new cruiser was handled as for the heavy cruisers with a quarter held in ready-use storage in Sydney and three-quarters ready for despatch to Singapore.³²

Shortly after the Abyssinian crisis, and the unpalatable lessons for naval planners, the 1937 Imperial Conference considered Imperial defence. Britain's strategic security had declined markedly in the 1930s and her naval strength was not sufficient to meet Germany and Japan simultaneously. If the French Navy could be relied on to augment the Royal Navy in Europe, then a fleet could still be sent to Singapore but agreement with France had not been reached and Admiralty plans were based on the British Empire acting alone. Without French support, a fleet strong enough to match Germany would have to be retained in Europe in peace or war and the prospects of an effective British fleet being despatched to Singapore had vanished. Despite this, the Singapore strategy remained the theoretical cornerstone of Imperial naval defence. Confidence was expressed that a fleet at Singapore could deter Japanese expeditions in the area (especially an invasion of Australia), and enforce an economic blockade if Japan avoided a fleet action.³³

Yet many statements outlining the factors influencing British naval strategy made clear, for those who would see, that the despatch of a fleet to Singapore was very much in doubt. The most damaging admissions were that Japan would probably not attack the British

Empire unless Britain was already at war with Germany³⁴ and in a war with Germany the Royal Navy would be hard pressed, even with French assistance, to spare any capital ships for the Far East.³⁵ Internal Admiralty papers were more pessimistic and Roskill's assessment that the Admiralty was "...less than honest..." with the Dominions about Singapore at this conference is relevant.³⁶

At the conference, Admiral Sir Ernle Chatfield (First Sea Lord) made clear that up to 70 days must be allowed for the Fleet to reach Singapore after the political decision to despatch it had been made.³⁷ He outlined a revised plan of naval action around Singapore while waiting for the Main Fleet to arrive. Since the British cruiser force in the Far East was too weak to prevail against expected Japanese naval strength, cruisers were to remain clear and ensure they were ready to join the Main Force when it arrived. Long-range air reconnaissance would maintain contact with Japanese forces approaching Singapore. Aircraft and submarines, possibly assisted by destroyers at night, would strike the Japanese Fleet before it came within range of the 15-inch guns at Singapore.³⁸ This change from earlier unrealistic plans to oppose battleships with cruisers, described by a competent contemporary observer as "...wholly inadequate to offer serious opposition to Japan...",³⁹ required fewer cruisers immediately available and lessened the need for the RAN to hasten to Singapore.

In 1937 Imperial Conference was a turning point for Australian naval plans. Australian politicians at the conference repeatedly sought and received re-assurance that the Main Fleet could be (and would be) sent to Singapore and, after they returned to Australia, spoke as if they accepted British promises. Despite this apparent acceptance of the Singapore strategy, RAN plans changed fundamentally after the 1937 conference and War Orders approved by the Naval Board in April 1938 advised commanding officers that "...The object of HMA Naval forces in the early stages of a war against JAPAN becomes THE DEFENCE OF TRADE IN AUSTRALIAN WATERS..."⁴⁰ RAN ships were now assigned war stations at Sydney and Fremantle with orders to patrol Australian waters. The RAN was expected to deal with attacks on maritime trade by cruisers, submarines or up to two heavy ships; attacks against territory by gunfire and aircraft bombing; and sorties by small raiding parties of up to 200 men landed from cruisers and armed merchant cruisers.⁴¹ Listing enemy heavy warships as a threat to Australia reflected concern at the growing number of German pocket battleships

and heavy cruisers being built for commerce raiding which were capable of reaching Australian waters.⁴²

Assigning the RAN to roles on the Australia Station was a practical measure by the Admiralty in the face of Australian governments' refusal to agree to automatic transfer of the RAN to Admiralty control in wartime. Naval Board plans to assign RAN ships to the Admiralty were useful but not politically binding; only the Australian government could commit the RAN to the Admiralty and successive governments refused to commit themselves before war had begun. Uncertainty at when, or if, Australian warships would be available prompted Admiralty planners to exclude the RAN from war plans.⁴³ As well, it should not be overlooked that Australia was closer than Europe to Singapore and RAN cruisers could leave Australian waters after the British Main Fleet had set out for Singapore and still join Royal Navy cruiser squadrons in the north-eastern Indian Ocean ready to advance to Singapore with the Main Fleet. During the Abyssinian crisis the RAN had gathered at the Australian port (Darwin) closest to the likely scene of action to await events and the same course of action could have been followed in case of war with Japan.

After 1937, instead of planning to form part of the Royal Navy's shield based at Singapore, the RAN emphasised the capabilities needed to defend Australian interests behind that shield. Australia remained formally committed to Imperial naval defence in principle but the 1938 equipment programme introduced a shift in emphasis towards a more balanced and self-reliant navy. Vice-Admiral Sir Ragnar Colvin (Chief of the Naval Staff, 1937-1941) expressed this new emphasis when he told the Council of Defence in December 1977 that "...the first consideration in a future defence policy must be the defence of Australia from a local Defence point of view..."⁴⁴ The resulting naval expansion was far from complete when the Second World War broke out in September 1939 but two cruisers (HMA ships *Hobart* and *Perth*) had been added to Australia's naval order-of-battle.

Despite the pre-war refusal to accept automatic transfer to Admiralty control, most of the RAN was made available for Admiralty service far from Australian waters. This was strictly in accordance with concepts of Imperial defence under which Australia should help Britain as much as possible in the expectation that Britain would reciprocate if Australia was threatened.⁴⁵ Despatching cruisers and destroyers to the Mediterranean, north-west Indian Ocean, or the Atlantic, and personnel

for service with the Admiralty, was seen not only as an Imperial duty but as insurance that Britain would defend Singapore and station the Main Fleet there if Japan entered the war.

This hope was in vain. By the time Japan entered the war Britain perceived far more important problems than Australia's security and was not prepared to allocate sufficient forces to make good her pre-war promises to defend Australia.⁴⁶ The new battleship HMS *Prince of Wales* and the old battle-cruiser HMS *Repulse* arrived in Singapore just before Japan attacked Pearl Harbour but both were soon sunk by Japanese naval aircraft and Britain declined to replace them. The Singapore base, supposedly prepared to hold out for many months, surrendered after less than a month of siege.⁴⁷

RAN ships were not directly involved in the forlorn attempt to defend Singapore, which fell to the Japanese Army, but were included in the handful of Australian, British, American and Netherlands warships which failed to significantly slow the Japanese advance through the Netherlands East Indies. During these operations, and the subsequent withdrawal to Australia, the light cruiser HMAS *Perth* and the sloop HMAS *Yarra* were sunk.⁴⁸ The destroyer HMAS *Vampire* was sunk during a Japanese sortie towards Ceylon in April 1942.

Rabaul soon fell to Japan but Japanese attempts to land troops and capture Port Moresby as a base for further expansion towards New Caledonia, Samoa and Fiji⁴⁹ were frustrated at the Battle of the Coral Sea. *Australia* and *Hobart* were stationed (with the cruiser USS *Chicago*) ready to destroy Japanese troopships as they approached Port Moresby but the troop convoy turned back before reaching the waiting cruisers.⁵⁰ In June 1942 Japan's aircraft carrier strength was so reduced at the Battle of Midway that additional expansion was deferred. The threat to Australia was further eased when American forces, with Australian forces assisting, frustrated Japanese plans for an air base at Guadalcanal from which aircraft could have harassed the lines of communication between Australia and America.⁵¹

By the end of 1942, when the direct threat to Australia had been relieved, the Singapore plan had become irrelevant to Australia's defence. Neither the Singapore Naval Base nor the Main Fleet had filled the significant part in defending Australia promised by successive British governments and on which Australian governments had based their defence planning. Singapore had dominated Australian naval development in the 1920s and 1930s and all significant naval decisions were influenced

by the belief that the British Main Fleet would defend Australia from Japan. Confidence in the Royal Navy's shield of sea power meant that successive Australian governments were satisfied with a national navy equipped for a supporting role and they developed the RAN as an adjunct to the Royal Navy. Part of the reason was the entrenched reluctance of Australian governments to spend money on defence but this attitude was encouraged by repeated British government assurances that the Main Fleet at Singapore would guarantee Australia's security and that Australia should acquiesce in Britain's Singapore policy.

Unfortunately, the Singapore plan proved inadequate as a basis for Australian naval planning. Capital works needed to establish the well-defended naval base crucial to the plan remained incomplete but planning rigidity was a more important defect. While the international situation changed significantly, and fundamental assumptions made in the early 1920s crumbled in the 1930s, the Singapore strategy remained unchanged and Australian governments continued to believe that the Main Fleet would protect Australia. Confidence in Singapore and the Royal Navy shaped the Australian Navy to operate under the overall protection of an allied fleet and it was not in a condition to meet the Japanese advance when that protection failed to materialise.

Notes

Abbreviations

AAC — Australian Archives, Canberra Office

AAV — Australian Archives, Victorian (Middle Brighton) Office

1. R.M. Jones, 'Jellicoe and the RAN' *Defence Force Journal* No 18, Sep/Oct 79, pp44-51.
2. James Neidpath, *The Singapore Naval Base and the Defence of Britain's Eastern Empire, 1919-1941*, Clarendon Press — Oxford, 1982, p35.
3. Neidpath, p45.
4. Bruce, 27 June 1924, *Commonwealth Parliamentary Debates* Vol 107, p1701.
5. The London Treaty of 1930 defined these ships as heavy cruisers and that term will be used to distinguish ships with 8-inch guns from light cruisers armed with 6-inch guns.
6. Bruce, 27 June 1924, *Commonwealth Parliamentary Debates* Vol 107, p1702.
7. The name of the Australian Fleet was formally changed to the Australian Squadron on 1 August 1926 because the small number of warships in commission, and their limited capabilities, no longer justified the term 'Fleet'. Item 404/201/87, MP 124/6, AAV.
8. Item 1968/2/45 (Oct-Dec 1925 report), MP 1049/5, AAV.
9. Neidpath, p105.
10. Ian Hamill, *The Strategic Illusion: The Singapore Strategy and the Defence of Australia and New Zealand, 1919-1942* Singapore University Press, Singapore, 1981, p166.
11. Neidpath, p120.
12. Neidpath, p114.

13. Naval Board to Admiralty, 9 October 1931. Item 1933/2/72, MP1049/9, AAV.
14. Neidpath p118, 125 and Hamill pp166-169. This is the other side of Australia's refusal to contribute to the base. The need to repay the Empire's contributions if the base was cancelled was a very persuasive argument against abandoning the plan for the British Government. Australia's action in spending her money elsewhere did not assist in keeping the base plan alive.
15. Neidpath, p125.
16. Neidpath, pp124-5.
17. Admiralty to Naval Board, M.02799/31, 19 April 1932. Item 1933/2/72, MP1049/9, AAV.
18. Minute by Farncomb, 29 October 1931 and Admiralty to Naval Board, M.02799/31 dtd 14 December 1931. Item 1933/2/72 MP1019/9, AAV.
19. Memorandum on Exercise MU, 15 December 1925, pp152-155, *The Keyes Papers Vol. II: 1919-1938* Navy Records Society, Vol 121, 1980.
20. War Instructions for Commanding Officers of Ships of HM Aust Squadron dated 7 May 1934, issued by the Rear Admiral Commanding the Australian Squadron and approved by the Naval Board. Item 1933/2/87, MP1049/9, AAV.
21. Farncomb as SO(2), 8 October 1931. Item 1933/2/72, MP1049/9, AAV.
22. D.M. Horner, *High Command: Australian & Allied Strategy 1939-1945*, Canberra, 1982, pp10-12, describes Army opposition to government policy.
23. Hamill, pp252-258.
24. "Estimates of Expenditure, 1935-36. Explanatory Statement Presented by the Minister for Defence." Item 474/401/1183, CRS A664, AAC.
25. 1934 Conference Agenda, Item 1990/2/275, MP1049/9, AAV.
26. Naval Board to Admiralty, 21 December 1932, and replay, 24 February 1933. Item 2026/3/42, MP1049/5, AAV.
27. Item 1990/2/275, MP1049/9, AAV.
28. Parkhill to Defence Council, 17 January 1935. File 2026/2/96, MP1049/5, AAV.
29. S.W. Roskill, *Naval Policy between the Wars Vol 2 The Period of Reluctant Rearmament 1930-1939*, London, 1976, p263.
30. Roskill, pp253-254.
31. Item 1933/2/101, MP1049/9, AAV.
32. Item 2026/3/81, MP1049/9, AAV.
33. "Minutes of Meeting to Discuss Defence Questions", 1 June 1937, in R.G. Neale, *Documents on Australian Foreign Policy 1937-49 Volume I: 1937-38*, Canberra, 1975, p104.
34. Chatfield quoted in Neale, p104.
35. Chatfield in Neale, p107.
36. Roskill, p347.
37. "Minutes of Meeting to Discuss Defence Questions", 1 June 1937, containing quote from Far East Appreciation, Neale, p108.
38. Chatfield, in Neale, p108.
39. Vice-Admiral C.V. Osborne, RN 'War in the Pacific' in *Evolution of Sea-Power* Charles W. Domville-Fife (ed), London 1939, p212.
40. Item 1933/2/114, MP1185/8, AAV.
41. Admiralty memorandum M 00625/37, January 1938. Item 1933/2/115, MP1185/8, AAV.
42. Roskill, p348.
43. Roskill, p434.
44. Quoted in Carolyn O'Brien, 'Oceans Divide, Ocean Unite: The concept of regional security in Australian defence planning', *Australian Journal of Politics and History*, Vol 25, 1979, pp201-209.
45. David Day, *The Great Betrayal: Britain, Australia & the Onset of the Pacific War 1939-42*, North Ryde, 1988, p16. and Raymond Callahan 'The Illusion of Security: Singapore 1919-42' *Journal of Contemporary History*, Vol 9, No 2, Apr 74, p83. This article succinctly explains the Singapore problem from Britain's point of view.
46. Day, pp212-213, 216-217.
47. Japanese forces landed at Kota Bahru (near the Thai/Malay border) on 8 December 1941 and had pushed the British forces back onto Singapore Island by the end of January 1942. Singapore surrendered on 15 February.
48. G.H. Gill *Australia in the War of 1939-1945* Navy series in two Volumes, Canberra, 1957, 1968. Volume 1, pp618-624 describes *Perth's* sinking, pp629-632 describes *Yara's* loss. John Costello *The Pacific War* London, Chapter 9 paints the larger picture of the Japanese advance.
49. Horner, p181.
50. Gill, Vol II, pp47-53.
51. Gill, Vol II, p117.



THE STRATEGIC IMPLICATION OF PERESTROIKA

by

LCDR A. Hinge

The article examines the strategic implications of the new Soviet policy of Perestroika, firstly in Europe on the central front and then in the Asia-Pacific Basin. A proposed policy for Western nations to deal with the new strategic situation is then put forward.

The global relationship between the Communist East and Capitalist West has been compared to that of two chess players in a darkened room involved in a game they can hardly see. Each player relies on the other not to upset the table and believes the other player has a sinister master plan which is in reality a mirror image of his own worst aspirations. Distrust and misperceptions abound.²

During the late 1980s the Communist World player represented by the USSR has made a number of surprise 'moves' which have not only changed the direction of the geopolitical game but also its very nature. These moves may or may not upset the strategic global chessboard but we of the West are nevertheless fully committed to playing the game as our own survival is inextricably interwoven with that of the player on the other side of the table. We must be aware of the implications of the other player's moves so that our responses will be appropriate.

The surprise moves derive from a radically new dimension of Soviet policy known as Perestroika. Perestroika means reform or restructuring applied to economic, industrial bureaucratic and even political re-organisation of many Soviet institutions. Perestroika aims at productivity enhancement by encouraging initiative throughout the Soviet populace. Initiative has been markedly absent in the stagnant institutions of the USSR and a complementary policy known as Glasnost is meant to support Perestroika by building confidence. Glasnost aims at encouraging

domestic and international confidence through the open discussion of issues relating to the USSR and its relations with other countries.

The aim of this essay is to assess the strategic implications of Perestroika, the new centrepiece of Soviet policy.

Methodology

In assessing the strategic implications of Perestroika we must ask and attempt to answer a series of important questions. These are:

- Who are we 'playing' with?
- What are the goals of Perestroika and the reasons behind it?
- Is Perestroika here to stay or is it merely an aberration?
- If Perestroika survives as the permanent centrepiece of Soviet policy what are the main strategic implications for the West and,
- Do we of the West change the way we play the 'game' with the Soviets?

An Image of the Enemy

Winston Churchill once described the Soviet Union as '... a riddle within an enigma wrapped in a mystery'. In many ways he was right but today we are not looking at the USSR through a prism distorted by the excesses of Stalinism. Soviet society is much less closed than has been the case and we are more able to judge Soviet motive and intent on the basis of objective conditions currently existing within the USSR. If we fail to judge on the basis of objective conditions we stereotype the USSR

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and can completely misread the implications of the situation.

By stereotyping the Soviet player we run the risk of either minimising or exaggerating the implications of Perestroika. For example, if we commence our analysis by taking the classical view that the Soviets are expansionist fanatics implacably committed to 'burying us', Perestroika is pigeon holed as a sinister, evil trick designed to weaken Western commitment, milk capital and sap military strength. On the other hand, if we look through the rosy prism of liberal democratic values we tend to sympathise with a harmless, misunderstood, xenophobic culture and Perestroika becomes a means of cultural convergence by which we can recreate the Soviet in our own 'decent God fearing image'.

The truth is that both stereotypes are dangerous nonsenses and we must resist using them. The archetypal 'Ivan' is neither black nor white, he is grey (with a dash of red). Soviet actions have to be judged on the basis of objective conditions existing within and without the USSR and the known constants of communist behaviour.

Why Perestroika?

Perestroika is the policy of the Soviet Communist Party aimed not primarily at reducing pressure from outside but coping with a systemic economic and social crisis from within.

The fundamental ideology of the Soviet Union, Marxism-Leninism, implies that under the guidance of the Communist Party and Working Class has the leading role and together with the peasantry is building a prosperous system. Under the system social justice and equality would be established together with the elimination of exploitation of the masses once collectivisation and nationalisation of the means of production has been implemented. However, the promised economic miracle did not occur and the Soviet Union has become the very antithesis of a 'Workers Paradise'. Societal differences persist (the Soviet Union has over 100,000 millionaires!) and growing disenchantment has derived from the many inherent hypocrisies now evident within the system.

Consequently, the Party faces a number of fundamental challenges to its legitimacy and authority. The revolution has appeared to have frozen. Ideological fervour has not only declined within the USSR but disillusionment is increasing in the Third World. Other than a few heavily subsidised and extremely stagnant nations such as Vietnam, Cuba and

Afghanistan, the Soviet Union has few friends.³ To make matters worse the managers at the Kremlin see 'decaying capitalism' prospering, even booming with a revitalised Europe, dynamic Japan and the US still doing very well thank you.

The Soviet economic situation has become so bleak that the Chairman of the State Planning Committee, Mr Maslyukov, stated before the Congress of Deputies that the economy was sliding towards disaster.⁴ The deficit for 1989 was US\$250 billion, constituting a massive one seventh of the USSR's GDP. Steps proposed to remedy the situation include reducing state enterprise losses by selling off unprofitable industries, severely trimming defence expenditure, introducing a new system of taxes and also price/credit regulation.⁵

Major labour unrest has resulted from the appalling economic situation. The Kremlin was forced to pledge \$US86.58 billion in food and consumer goods to bring an end to the Siberian miners strikes of mid 1989.⁶ An earthy indication of the chronic shortage of consumer goods is represented by the fact that in a population of 287 million there exists only 3.5 million television sets (less than in Australia which has a population of one seventeenth that of the Soviet Union). The Kremlin has pledged to triple television production to 10.6 million by the end of 1990.⁷

The Soviet Union is also now showing several objective signs of disintegration with Marxism-Leninism having failed as an instrument of rule over racial minorities. The Ukraine, with a relatively prosperous population of 50 million, is strongly claiming more autonomy and even full independence. Economic failure of the system is contributing to the growing assertiveness of national elites in eastern Europe, especially Hungary and Poland. Consequently the cohesion of the Warsaw Pact group of countries has seriously deteriorated with Hungary and Poland being pro-democracy, Rumania and Czechoslovakia being hardline and East Germany starting to show definite signs of a national 'identity crisis'.⁸

Economic tensions have also brought to the surface racial and religious tensions which abound in the USSR. In the worst publicised case of its type the Soviet Republic of Azerbaijan has placed an economic blockade on the adjacent Republic of Armenia coming almost to the brink of war.⁹ Bearing in mind that well over half the Soviet Armed forces comprise of non-Russian Soviets it is logical to assume that growing disciplinary problems exist within the forces, especially given the well

publicised criticisms made by Defence Minister Yazov concerning the sharp rise in the number of people trying to avoid military service.¹⁰

The Soviet system is simply not delivering the 'goods'. Therefore the Party must show to the world and its people that communism can succeed as an economic and political system. From the view point of its very survival the Party must genuinely restructure industry and rebuild the national economy and the most important element of rebuilding involves a necessary transfer of substantial resources from the military to the civil sector.

To support the Arms Race the Soviet Union has had to invest a staggering 17 per cent of its GDP to support its defence establishment. If this were not bad enough, over 50 per cent of the Soviet budget goes to the Military-Industrial complex in one form or another.¹¹ These expenditures have also led to the revitalisation of Western military forces in the 1980s and the Soviet Union can only maintain its position of parity on the basis of continued sacrifice by its people in terms of standards of living. Many of the people are unwilling to make these sacrifices and the Party knows it will face even more critical challenges if it is not serious about Perestroika and doing its utmost to make it work. To make Perestroika work and divert resources from the military sector the powerful and potentially threatening military elites in the USSR would have to be convinced of a diminished strategic threat from the West. Since 1986 the Soviet leadership has been taking decisive steps to ease military tension with the West, through comprehensive disarmament actions and proposals.

Broad Strategic Changes

Mikhail Gorbachev, General Secretary of the Communist Party of the USSR acceded to power in 1985 and almost immediately set about a comprehensive process of reform and reduction of tension between East and West. He fully comprehends the results of industrial, technological, economic and bureaucratic stagnation he has inherited from Stalin, Krushchev and Brezhnev. He knows that the survival of the Party and Soviet Union itself is now more under threat from these factors within than from an unlikely attack from the West.

To free more resources for use in the civil sector Gorbachev has introduced a national defensive doctrine based on 'reasonable sufficiency'. Rather than extend Soviet influence by direct or proxy involvements which characterised the Brezhnev era, Gorbachev states he is only concerned with repelling

aggression and avoiding war. At the 27th Party congress in 1986 the Party military policy was changed from '... to constantly ensure that the armed forces have at their disposal all means necessary', to '... making every effort to ensure that the armed forces are at a level excluding strategic superiority on the part of the forces of imperialism'.¹²

Gorbachev, as head of the Soviet Defence Council, actually changed the formal definition of Soviet Military doctrine from '... preparing for and conducting war' to 'prevention of war'.¹³ In May 1987 the Warsaw Pact formally adopted a defensive as opposed to a dominantly offensive doctrine.¹⁴ Substance was added to this otherwise nominal change by the withdrawal of many Soviet specialist and tank units from the Eastern Block. According to the London based International Institute of Strategic Studies (IISS) the withdrawal of these groups, including vital bridging units, could delay a Soviet offensive against NATO gaining full momentum by up to two weeks.¹⁵ This has been seen as a significant confidence building measure aimed at encouraging Western Europe to believe that Soviet intent is not malevolent or pre-emptive.

The Soviet policy aimed at reducing political-military tensions and drastically dampening the Arms Race has been manifested in a number of other Arms Control initiatives in the Conventional and Nuclear armaments areas. Gorbachev and his representatives have made several surprise concessions in a number of Arms Control forums and agreements. These include:

- Intermediate Nuclear Forces (INF) Treaty. This Treaty was signed by Gorbachev and Reagan at the 1987 Washington Summit.
- START (Strategic Arms Reduction Talks). In August 1989 the USSR made concessions which removed a stumbling block which had stalled START for five years by not requiring the US to limit the Strategic Defence Initiative (SDI). The potential now exists to reduce Soviet and US long range nuclear arsenals (ICBM) by up to 50 per cent. Ratification of the 1974 Threshold Test Ban Treaty and the 1976 Peaceful Nuclear Explosions Treaty is also expected.¹⁶
- Conference on Security and Co-operation in Europe (CSCE).
- Conference on Confidence and Security Building Measures and Disarmament in Europe (CDE). Soviet combat units and specialist units have already been withdrawn as discussed above.
- Conventional Stability Talks (CST). A Conventional Forces in Europe Treaty is

currently being negotiated in Vienna and should be agreed in late 1990.¹⁷

- Conference on Disarmament. A major result has been that the USSR ceased chemical weapon production on 26 December 1987 and claimed to have reduced its stocks to 50,000 tonnes. The US and USSR are discussing a reduction of up to 80% in their stockpiles and encouraging Third World nations to do the same.¹⁸

The views of Gorbachev and other like minded reformers in the Soviet Union concerning the link between Perestroika and Soviet international relations, including arms negotiations, was summarised in a conference keynote address given by the USSR Ambassador to Australia, Mr E. Samoteikin in 1987:

'... Last year the Party Congress, the highest forum of Soviet Society, set forth our vision of the world, our philosophical concept of its present and future. We did not just proclaim a pure theoretical doctrine but formulated a definite political platform for an all embracing system of international security. This is a system based on the principle that one's own security cannot be ensured at the expense of others; it is a system that organically links all main areas of security — military, political, economic and humanitarian.

We consider this system to be an essential international background for the process of restructuring and acceleration which has been launched on such a large scale in our country. The reasons are quite obvious — we simply won't be able to reach our goals at home in a hostile international environment, spending material and intellectual resources of our society on the Arms Race and confrontation'.¹⁹

The strategic implications of this viewpoint are already being felt, particularly in Western Europe and the Asia-Pacific basin where the USSR focuses much interest. Looking first at the European Theatre or Central Front, major military and political change has already taken place as Gorbachev has successfully consolidated his personal power in the USSR and his prestige abroad in a quest to minimise traditional international hostility to his country.²⁰

Implications for Europe

Europe has been and will remain the principle focus of Soviet strategic interest and, more than ever, the USSR needs a stable, prosperous and friendly Western Europe on its increasingly blurred, 'unfenced' borders.

For almost half a century the North Atlantic Treaty Organisation (NATO) has been the guarantor of Western Europe's defence. But times are changing. With Perestroika comes a belief in some excessively optimistic strategic circles that the Cold War is over and the very relevance of NATO has been questioned. After all, the three elements on which NATO relied for initiation and sustenance have been seriously eroded. These elements are:

- Soviet Obduracy or hard heartedness
- European dependency, and
- US prosperity.

The Soviets have now formally admitted that a NATO attack on their territory is unrealistic in terms of capability and intent.²¹ Important Warsaw Pact forces have been withdrawn as confidence building measures and the Kremlin has seemed to have given Warsaw Pact nations a *de-facto carte blanche* in terms of domestic reform. It is also apparent that the Soviets can no longer rely (if they ever could) on Warsaw Pact forces in a major offensive or Counter offensive against the West. Consequently, many in Western Europe have, with some justification, lost a sense of danger and threat from the Soviet Union.

Hand in hand with the growing perception of a lack of Soviet threat to Western Europe is a dawning sense of independence of traditional US military assistance. Western Europe has emerged in the 1980s as a highly stable, increasingly prosperous community which can afford advanced weaponry, reasonable standing armies and, in the case of the UK and France, even independent nuclear deterrents. This growing and substantial military autonomy coincides with less inclination by the US to act as the bulwark of free Europe's defence.

The third element on which NATO has traditionally been based is US prosperity. Even this element is atrophying as the US finds it harder to maintain its heavy military commitment to NATO in dollar terms. Particularly since the Vietnam commitment the US is far less inclined to act as the 'world's policeman' and no longer believes it is able to achieve everything. To many Europeans, who welcome the US presence less and less, the US appears to be a young but tired giant whose presence in Europe is increasingly questioned as a liability and may even be escalatory. On the US domestic scene several US interest groups question the heavy American commitment to NATO and advocate increased 'burden sharing' among the Western European nations. A trend is thus emerging in the US which advocates 'full burden sharing' by Western Europe and

the phased withdrawal of some 300,000 US Servicemen comprising the US ground forces in Europe.

With the erosion of the three factors which have traditionally propped up NATO comes a strong likelihood for increased burden sharing in Western Europe corresponding with a substantial withdrawal of both US and Soviet forces from the Central Front. Ultimately it is possible that the brunt of Europe's defence could be borne by the UK, France and the FRG with the FRG financially assisting with maintaining the UK-France independent nuclear deterrent forces.

A matter of importance is whether an autonomous European defence coalition can develop the necessary political-military cohesion to deal with Moscow alone. If history is any guide this could only be done with great difficulty given that Europe has traditionally been a hotbed for warring nation states.

Of course Western Europe is not alone in the question of unity and cohesion. The Warsaw Pact countries have innumerable problems of their own which dwarf those of Western States. The great concern is whether the Eastern Bloc and Soviet Union generally is starting to fall apart and whether from the consequent chaos and ethnic violence new and unpredictable dangers may arise. Change is occurring at a disconcerting rate in the Soviet Union. Perestroika may not deliver the 'goods' quickly enough, if ever, and some fear that the USSR will again be in conservative hands, reminiscent of Stalin or Brezhnev. Foreign 'adventures' may be sought to take peoples' minds off their stomachs. Failure of Perestroika would lead to much instability, and the global 'chessboard' would be thrown into confusion.

This is particularly true if Europe disintegrates into a group of loosely aligned, rival states some of which are equipped or will be equipped with their own independent nuclear deterrents. Obviously this is a worst case contingency and there is no reason to believe it will eventuate.

Yet if Perestroika gets past its first few faltering steps, as has been the case to date, there is the important prospect that Europe as a whole is likely to be less a focus for superpower militarisation. This is not only in the direct interest of the Superpowers and Europeans but is beneficial for the world as a whole.

Implications for the Asia-Pacific Region

While being regarded as a legitimate European power for centuries Russia has traditionally been viewed with much suspicion by the

nations of the Asia-Pacific Basin. Apart from in North Korea and Vietnam; which are both poor, heavily subsidised and have few friends, the USSR has little political or economic clout in the region. For decades the USSR has been at odds with the major players in the region, China and Japan, over a variety of issues ranging from the ideological to the territorial. The Soviets have been frequently at war with both Japan and China this century. Indeed, animosity between the Slavic and Mongol racial groupings has been reflected in countless battles across the central Euro-Asian land mass for 1500 years.

As with Europe, the Kremlin seeks to normalize bi-lateral relations across the region, particularly with Japan and China. But the complexion of the problems faced in the Asia-Pacific region are very difficult to those faced in Europe and are in many ways more intractable.

Growing Soviet interest in the region is primarily economic and secondly strategic. Economically the region is considered dynamic and widely deeded as taking the central place in the future world economy if it has not already done so. The US now carries out more bilateral trade with the region than with Europe and it has been said that '... the pendulum of history has swung from the Mediterranean to the Atlantic and it is now pointing towards the Pacific'.²² This may be overstating the case, however, the USSR is accepting the challenge of normalising relations with Asian-Pacific nations very seriously indeed.

Gorbachev aims to avoid having to further militarise the far Eastern USSR and if possible reduce forces there so that funds can be released for the development of Siberia. At the same time he wishes to capitalise on the economic dynamism of the region by attracting investment for the exploitation of the Soviet Far East. After the Siberian miners' strikes he is more than ever acutely aware of the need to make conditions conducive for developing the far eastern regions of Siberia, and improving the lot of the Soviet populace there. Joining in the growth of the Asia-Pacific region would be a major step in his economic restructuring process and in the attraction of substantial foreign reserves.

In 1986 Gorbachev made what is known in the West as the Vladivostok Initiative. During a visit to Vladivostok in that year he made a comprehensive statement on the Soviet Union's role in the Asia-Pacific region. He stated that the Soviet Union was a legitimate Pacific power which was entitled to have an interest in the stability of the region. Not only

did the Soviet Union have important Sea Lanes of Communication passing through the region, he argued, but the region involved potential serious military threats especially from the US-Japan-South Korea 'militarised triangle'.²¹ He also emphasised the Soviet desire to increase trade, tourism and cultural exchanges in the region while making it clear that the USSR was not after any special rights or privileges.

The stated aim of the Vladivostok Initiative was to invigorate bilateral relations with all the countries of the Asia-Pacific region 'without exception'. Moreover, the Soviets have made several moves to improve dialogue with countries ranging from the economically powerful Japan to the far more distant and less influential Indonesia.²⁴ Specifically, Gorbachev made mention of the following regional needs:

- Joint efforts are required for settling regional issues in Afghanistan, Cambodia and Korea,
- Scaling down of conventional and nuclear weapons and preventing nuclear proliferation in the region,
- De-escalation of naval activity,
- Resumption of talks on the Indian Ocean Zone of Peace, and
- Practical discussion on confidence building measures, particularly with regard to Sea Lanes of Communication and Counter-Terrorism.

Domestic reform imperatives have led to the USSR making genuine concessions to curry favour in terms of removing major obstacles to dialogue and diplomatic advances. The stumbling block of Afghanistan has been partly removed through the Soviet pullout in 1987-88 even though the Kabul Regime is now propped up with over \$US3 billion in Soviet aid. Similarly, in Cambodia the Soviets continue to provide much economic and military aid to the current regime but the Soviets have been seen to have used their leverage to encourage the Vietnamese to withdraw forces from the troubled area. While Soviet leverage over Hanoi should not be overestimated, as it was by US analysts during the Johnson-Nixon Administrations, it is nevertheless significant. It is almost certain that decreased military supplies to Cambodia is only part of a Soviet package to engineer a Vietnamese withdrawal. Of course, Vietnam itself is also heavily dependent on Soviet aid to the tune of \$US3 billion, and may well have been threatened with reductions unless it became responsive to Soviet preferences.

Undoubtedly the respective withdrawals from Afghanistan and Cambodia have enhanced Soviet prestige and credibility in the region which has been at a very low ebb. If

nothing else the Soviets are more and more perceived as being sincere in their efforts to develop a relaxed political climate in the Asia-Pacific Basin. This now allows the Soviet Union much more scope to improve bilateral relations throughout the Basin.

The Soviets appear to place special importance on improved bi-lateral relations with Japan and China for conspicuous strategic and economic reasons. Japan has often been described as 'America's unsinkable aircraft carrier' and the close linkage between the US and Japan on the USSR's eastern flank has always been deeply resented by the Soviets. Japan is decisive as an element of the US Maritime Strategy in the north west Pacific. Geographically, the Soviets are hemmed into constricted submarine bastions in the seas of Japan and Okhotsk and their surface fleet would be unlikely to prevail against the concentration of US Naval forces stationed in and around Japan. Obviously the Soviets would be interested in reducing the military nexus between Japan, South Korea and the US but even Gorbachev sees a falling out between the US and Japan as a low probability outcome at least in the medium term. Nevertheless Gorbachev seems determined to minimise the prospects of further militarisation in Japan involving either an increase in Japanese defence expenditure or enhanced US capabilities based on the Island, especially in the light of the uncertainty concerning the US Philippines bases.

Soviet strategic intentions in the Far East must be considered as almost entirely defensive.²⁵ Despite setting up a Far Eastern Theatre Command in the early 1980s Soviet force structure appears geared under Gorbachev to fulfilling only two modest but fundamental objectives. These are:

- to maintain the integrity of land based and sea based nuclear deterrent forces, and
- to maintain conventional superiority over China in the Air-Land battle.

While the subject of much US alarmism in recent years, an objective assessment of the Soviet Pacific Fleet (SOVPACFLT) reveals that while platform numbers and total tonnage is impressive it has a small capability to operate outside the cover of shore based Soviet Naval Aviation (SNA) assets if it were matched against the Americans.²⁶ Other than its nuclear submarine forces SOVPACFLT is not a fully capable blue water force able to conduct balanced, sustained operations. Its main tasks involve covering the Soviet submarine bastions in the seas of Japan and Okhotsk and blunting the intense US ASW efforts which would take

place in the bastions as declared in the official US Maritime Strategy statement of 1986.²⁷

Similarly, the role of Soviet forces maintained in Cam Ranh Bay in Vietnam is seen as being far more benign than formerly due to a failure on the part of the Soviets to use it to its full potential. It remains a limited logistic support and surveillance centre more than anything else. While it has a potentially valuable interdiction capability it is now deemed in many circles to be a non-decisive element in Soviet naval strategy in the Pacific.²⁸ Based on several objective analyses of infrastructure and units stationed at Cam Ranh Bay, the following remarks by Ambassador Samoteiken are quite legitimate:

'... About some 'Superpowerful naval base' at the port of Cam Ranh Bay in Vietnam, a base which allegedly poses a threat to sea lanes and straits. In this regard I must emphasise that the USSR has no naval base at Cam Ranh Bay in the sense of which it is customary to define such bases, namely, ones with complete infrastructure.

What exists over there is only a point for the material and technical resupply of the Soviet Navy. Ships call there to replenish stocks of water and food or to make minor repairs on their own. Cam Ranh Bay can in no way be compared with the US Subic Bay Naval Base in the Philippines, or with any of the 350 US military bases scattered around the region'.²⁹

Consequently the Soviets are apparently not taking an aggressive force structure stance in the Pacific and in fact are being quite restrained given declared US intentions and established US force structure and procedures in the area. For example, in 1985 the US Chief of Naval Operations, Admiral Watkins stated before the US Senate Committee on Armed Forces that:

'... In the North West Pacific our feeling is that at the very front end of conflict, if we are swift enough on our feet, we would move rapidly into an attack on Alekseyevka (a major Backfire Bomber base)'.³⁰

Indeed, the Soviets have shown remarkable restraint given the nature of some US-Japanese exercises in the region. For instance, elements of the Japanese Self Defence Force played an important role in the US FLEETEX 85 Exercise which tested US ability to protect Japanese Sea Lanes of Communication. The exercise, like many of its type, was potentially provocative in that it took place very close to sensitive areas of Soviet territory to test Soviet defences and standard operating procedures in a highly activated situation. The exercise involved 20 US vessels and various Japanese air assets.³¹

Seemingly wishing to avoid further escalation of Naval activity Soviet strategic developments in the Far East have been relatively conservative and unprovocative. A further example of apparent Soviet forbearance is indicated by positive actions undertaken to reduce tensions along the Sino-Soviet border. This involves the withdrawal of 13 Divisions from the border in addition to wide exchange of observers from both sides. Steps have also been taken to boost local trade, and ease freedom of movement across the border generally.

Chinese response to Soviet moves to reduce tension has been favourable though measured. China is now more inclined to maintain its policy of 'Equidistance' between the US and USSR and is not likely to become involved in a defacto Japan-US-China alliance which has been so dreaded by the Kremlin since the Nixon inspired rapprochement with China in the early 1970s. In fact the Sino-Soviet relationship was warmed even more since Gorbachev's mid-1989 visit to China and the failure of the USSR to criticize the Chinese leadership over the Tienanmen Square incident.³²

While a comprehensive rapprochement between China and the Soviet Union cannot be expected, increased dialogue is occurring and China will ensure it is not seen to be tied to the Soviets who it seems will never be above suspicion. China is also an important element in Japanese decision-making regarding closer economic ties with the Soviets. The Japanese are very conscious of the fact that China must not feel threatened by a large scale Soviet-Japanese joint enterprise in Siberian development. China would clearly see a comprehensive build-up of Siberian infrastructure as an adverse development in terms of its own long-term security. Furthermore, the persistent Soviet denial of Japanese sovereignty over the Southern Kurile Islands presents strong barriers to high levels of Soviet-Japanese economic co-operation. This situation was crystallized in May 1986 when Gorbachev told the visiting Japanese Foreign Minister, Mr Abe, that progress in Soviet-Japanese relations required '... the understanding that no-one will be encroaching on the results of the Second World War and the inviolability of the frontiers'.³³ This was a clear and forceful reference to Japan renouncing all claim to the strategically important Kurile Islands which it surrendered under the 1954 Treaty of San Francisco.

In view of these factors the Soviet Union is unlikely to make major advances either economically or strategically in terms of its relationships with Japan and China. The

Soviets still have relatively little to offer either of these powers and little real incentive exists for Japan to disrupt its relationship with the US or China in any way. Even the ill-defined Siberian economic development 'carrot' may not hold much interest for Japanese enterprises as the Japanese economy gradually restructures away from imported natural resource based industries.³⁴ Thus, for all intents and purposes, the north-west Pacific remains an 'American Lake' in which the strategic balance clearly favours the US-Japan alliance and Chinese 'Equidistance'.

The Soviet Union's inability to exert much political influence and offer real incentives is not limited to the North West Pacific. ASEAN nations and the Island States of the South West Pacific are unlikely to have substantial involvement with the USSR in terms of economic ties or meaningful strategic arrangements. While agreements for increased dialogue and economic co-operation have been made with some ASEAN nations, including Indonesia, concrete results have not been forthcoming due to the Soviet Union's fundamental lack of economic attraction, and lack of a constructive diplomatic tradition in the region. There simply appears little mutual economic advantage to be gained and this has been exemplified by the poor Soviet-Vietnamese bilateral trade relationship, and the unprofitable fisheries agreements the Soviet Union has initiated, and abandoned, with some Island States.³⁵

Therefore it is hard to avoid the conclusion that despite a general relaxation of tension throughout the Asia-Pacific Basin brought on by conciliatory Soviet actions, the region offers low penetrability to Soviet influence. The status quo in terms of major power strategic relationships will most probably be largely unchanged. However, the big strategic plus in terms of the USSR's policy of easing tensions is that animosities between the indigenous regional nations have been reduced by Soviet actions and influence. This is particularly so in terms of reducing regional animosity towards Vietnam by encouraging the pullout from Cambodia. As a consequence the probability of China giving its 'Second Lesson' to Vietnam is reduced and ASEAN nations can move towards improving relationships with Vietnam. Vietnamese expansionism will no longer be an issue.³⁶

A Word of Warning — The Importance of Ideology

Less than thirty years ago Nikita Krushchev made his famous pronouncement to the West that '... History is on our side. We will bury you!'

This colourfully reflects how true blue (Red?) communists see history in terms of class conflict and revolutionary struggle eventually resulting in a victory of the proletariat. With this victory comes the establishment of the final historical era ... the Socialist or Communist Order. In all our dealings with and assessments of Soviets we must not underestimate the importance of this tenet. Most of them really believe it.

While the Western World should welcome Perestroika and be biased to encouraging Mikhail Gorbachev's reforms it is important to bear in mind the importance of communist ideology. Marxism-Leninism should not be dismissed as having been displaced by pragmatism or Soviet Realpolitik. However, enlightened Soviet leaders such as Gorbachev may appear to be they are nevertheless products of a system steeped in propaganda and anti-Western ideology.

Gorbachev himself was born after the 1917 Revolution and was raised all his life under Communism. To achieve his current position he had to make a long progression through the Party ranks by doing and saying the right things and being under the patronage of devout communists. He was a protégé of ex KGB Chief Andropov. His appointment to the most powerful position in the USSR was strongly supported by Andrei Gromyko who served as Foreign Affairs Secretary under Stalin, Khrushchev, Brezhnev and others. Gromyko in fact recommended Gorbachev as a 'promising, brilliant leader'.

On the home front Gorbachev's wife is one of the most highly qualified communist theoreticians in the Soviet Union, being a Professor of Marxism-Leninism. All this adds to Gorbachev being a committed communist and he has never denied this. His life education, family heritage and political development all point to this. Let us also bear in mind that Gorbachev's Perestroika is an experiment and it, along with Gorbachev himself, could be gone tomorrow if the Party sees fit.

We of the West must play safe and assume that the communists ultimately believe their own ideology and are committed to a class struggle between two antagonistic and irreconcilable social, economic and political systems — Communism and Capitalism. We must also assume that the communist game plan is ultimately adversarial but has been modified for the present to achieve less pretentious objectives than export of the revolution and conversion of the world Communism. The current Party objectives have been reduced to Party Survival through the maintenance of economic and political stability. If and when

the current economic tribulation passes, a return to the adventurism of the Brezhnev and Stalin eras cannot be ruled out. We can trust in Gorbachev but let's 'keep our powder dry'.

How We Should Play the 'Game'

The Soviets when under pressure have changed the direction of the geopolitical 'game' before. Krushchev's Destalinisation 'Thaw' and Brezhnev's Detente or Razriadka both promised much but both left sour tastes in the mouths of many Westerners particularly concerning Cuba and Afghanistan respectively. While Gorbachev's Perestroika is more promising and the reasons for it seem more compelling we must not be too eager in assisting the Party.

To maintain a momentum towards real institutional reform in the USSR, which can ultimately benefit the West, the Party must be kept 'on the spot' as it were in terms of having to keep making hard decisions. These decisions concern more free elections, increasing production of consumer goods, keeping pressure off pro-democratic Eastern Bloc countries and reducing conventional and nuclear force levels in Europe and the Soviet Far East. After all, we want something out of the 'game' too. Our objective must be comprehensive bilateral disarmament.

Keeping the Soviets making the hard decisions involves not giving too many Western concessions too soon. For example, the proposal by the US Administration to give the Soviet Union 'most favoured nation' trading status would appear premature in the extreme. Bailing out the besieged Communist Party, even to a limited extent, too soon may reduce the rate of positive change and reinforce conservative elements at the highest levels. At the same time the West must assist to a sufficient level as not to allow the USSR to disintegrate into possible chaos. No sane person would take comfort in this eventuality. This could produce incalculable dangers and 'upset the board' by placing unknown reactionary players in powerful positions. The risks involved in striking a reasonable balance of assistance to Gorbachev and his reformers are great but the challenge is clear.

In Conclusion

It is naive to believe that Perestroika heralds the beginning of a post confrontational era. This is excessively optimistic. Perestroika is fragile and Gorbachev has opened a Pandora's Box involving an unexpected rate of change and internal threats to stability. Though his grip

on power seems firm he may be 'white anted' or deposed by conservative or even reactionary elements within the USSR at any time. Nevertheless we of the West should accept it as being in our best interests to assist the reform movement in the USSR since a greater convergence of interest and values may result between East and West. Tensions can be eased, communications can be improved and 'accidents' may be prevented. If we sit back, allow Perestroika to fail and promote the disintegration of the USSR, conservative leaderships which arise from the chaos will be far more difficult to deal with. To focus attention away from internal problems they may embark on foreign adventures reminiscent of Stalin and Brezhnev or worse.

The strategic benefits of the Soviet need to restructure and revitalise the system (Perestroika) are being felt in the West now. To concentrate on domestic reform and divert capital from the military to the civil sector the pragmatic managers of the Kremlin have now been forced to accept a conciliatory role on the world strategic stage. Meaningful and verifiable concessions in a wide range of nuclear and conventional armaments issues have been given in order to reduce international hostility to the Soviet Union. Not the least of these concessions is the removal of several barriers to major Intermediate and Long Range ballistic missile reductions. Many confidence building measures such as the withdrawal of substantial offensive units from the Central Front and Sino-Soviet border have eased tensions and have led to several positive developments. The need to court assistance from a prospering West and to dampen the Arms Race has also forced the Soviets to remove three major barriers to more stable, global strategic relationships. The removed barriers involve the withdrawal from Afghanistan, encouragement of the Vietnamese withdrawal from Cambodia and rending asunder the Iron Curtain in Eastern Europe. These efforts have involved much risk and are strong, objective indicators of the Soviet need to make Perestroika work.

Dampening of the Arms Race, partial demilitarisation of the Central Front and adoption of a defensive posture in the Asia-Pacific Basin indicates that the new Soviet doctrine of 'Reasonable Sufficiency' is more than just rhetoric. Consequently, the overall strategic implications of Perestroika are positive and a more relaxed global strategic climate has emerged. But remember, this is only because the more pretentious aims of communist ideology have been temporarily subordinated to the maintenance of Soviet

political and economic stability. Consequently they need us more than ever and we can 'capitalise' on this to our mutual strategic advantage.

'History' may be on their side but time is on ours.

Footnotes

1. Barnett R., 'The Giants: Russia and America' (Simon and Schuster, New York 1977), p29. The comment cited was made by an Aide to US Secretary of State, Henry Kissinger, in 1972.
2. *Ibid*, p9.
3. Soviet aid to Vietnam, Cuba and Afghanistan alone amounts to RUS8 billion. Vietnam and Afghanistan each receive \$US3 billion.
4. *The Australian*, 'Moscow Admits to Spiralling National Debt', 7 August 1989, p6. Maslyukov was advanced to full Politburo membership in the September 1989 reshuffle which left Gorbachev firmly in control of Politburo and Central Committee numbers.
5. *Ibid*.
6. *The Australian*, 'Soviets Import Food for Miners', 5 September 1989, p12. The Deputy Trade Minister, Mr Sarukanov, said more than \$85.58 billion extra had been allocated to buy food and other commodities from abroad in 1989.
7. *Op Cit*, *The Australian*, 7 August 1989.
8. See, *The Australian*, 'Krenz Orchestrates Union Reform in Bid to Appease Workers', 25 October 1989, p9. East Germany, once extremely hardline under the Honecker Administration, is now subject to widespread civil unrest. On 24 October 1989 300,000 protesters in Leipzig demanded freedom of expression and the right to travel to the West.
9. See, *The Australian*, 'Azerbaijan Escalates siege of Enclave', 6 October 1989, p8.
10. *The Melbourne Age*, 'Kremlin Shakeup Boosts Reforms', 23 September 1989, p8.
11. Regan D., 'For the Record: From Wall Street to Washington' (Hutchinson, London, 1988) p296. Donald T. Regan was President Reagan's Chief of Staff. Prior to this appointment he was US Treasury Secretary.
12. Manthorpe H., 'What is Pushing Gorbachev into Arms Control?' US Naval Institute Proceedings, December 1988, p41.
13. *Ibid*.
14. *Ibid*.
15. *The Australian*, 'Soviet Arms cuts will end threat of Surprise Attack', 5 October 1989, p8. The IISS Director, Mr Francois Weisbourg, said that the USSR had already commenced pulling out crack units including those responsible for bridge building and assault crossings. He stated 'Some of these divisions are divisions which any NATO planner would like to see removed. After cutbacks it would take the Kremlin one to two weeks to marshal its forces for an attack. In shorthand that translates as no surprise attack'. Under Gorbachev's proposed reductions 50,000 troops would be disbanded and 5,300 tanks destroyed.
16. *The Australian*, 'Gorbachev Offer they could hardly refuse', 25 September 1989, p8. Also, see 'Star Wars Deadlock Busted', p6.
17. *The Australian*, 'Arms Negotiations take break but still face some hard bargaining', 24 October 1989, p12.
18. *The Australian*, 'Third World' Unwilling key to chemical ban', 27 September 1989, p6.
19. Keynote Address by the USSR Ambassador E. Samoilin on M. Gorbachev proposal on normalisation of situation in the Asia Pacific Region. Delivered at ADFA Sponsored Seminar titled Gorbachev's Vladivostok Initiative: New Directions in Asia and the Pacific? (20 March 1987) p2.
20. In September 1989 Gorbachev arranged the placement of several of his confidantes in the Politburo. The Politburo became almost entirely reformist. See *The Australian*, 'Gorbachev cleans out hardliners', 22 September 1989, p7.
21. Manthorpe, *op Cit*, p40-41.
22. This statement was made by Admiral James Lyons USN a former Commander of the US Pacific Fleet. It appeared in the St Louis Post Dispatch, 22 January 1987, p3. (Cited by Dr P. Keal in his Conference Paper — Gorbachev's Vladivostok Initiatives: The Implications for Northeast Asia, p1.)
23. Speech delivered by Mikhail Gorbachev in Vladivostok on 28 July 1986. Novosti Press Agency Publishing House 1986, p35.
24. In mid 1989 Indonesia's President Suharto visited Moscow. An agreement to increase dialogue and the frequency and ease of visits was made. Agreement to explore avenues of economic co-operation was also made.
25. See Babbage R. (ed), 'The Soviets in the Pacific in the 1990s' (Brassey's/Pergamon, Sydney, 1989). The chapter by M. Mackintosh, a prominent British Sovietologist, analyses likely Soviet military doctrine and operational capability in the next decade. He examines a number of potential contingencies in the Far East and concludes that Soviet plans in the Asia-Pacific region are basically defensive. This stands in stark contrast to the US forward deployment strategy.
26. SOVPACFLT suffers many inadequacies. Compared to the 7 Attack carriers in USPACFLT (7th and 3rd Fleets) the Soviets have 2 Kiev Class Medium carriers. Cruiser and battleship numbers are about equal. While SOVPACFLT has approximately 86 Destroyers and Frigates on paper, 45 of these are obsolete gun destroyers/frigates of the Skory, Kotlin, Kilder, Riga, Grisha and Petya classes. The US has 77 modern destroyers deployed i.e., twice the number as in SOVPACFLT. The US has 44 Nuclear Attack submarines in the area compared to SOVPACFLT 30. While SOVPACFLT has 60 Attack/Patrol conventional submarines on the books 75% of these are old hulls of the Z, W and F classes. They would not be operationally reliable outside the SSBN Bastions. Most of SOVPACFLT 830 vessels and tonnage is made up of hundreds of minor war vessels such as minesweepers, transports, patrol boats and amphibious forces. Also, in the area of fleet based combat aircraft, the US has of the order of 10 times more 'at sea' than the Soviets. These are supplemented by large numbers of modern aircraft in Japan, Korea, Guam and the Philippines. US aircraft generally have a high qualitative advantage over their Soviet counterparts. The serious limitations of Soviet major surface combatants in terms of conducting sustained operations outside of SNA air cover are comprehensively described in the 'Report of the Atlantic Council Working Group on Securing the Seas: The Soviet Naval Challenge and Western Alliance Options', (Boulder, Colorado, Westview Press, 1979) esp p74. See also, G. Jacobs 'Is the Soviet Navy all that it is cracked up to be?', Pacific Defence Reporter, January 1983 pp72-79. This article gives a summary of the limitations of SOVPACFLT war-fighting and war-sustaining capabilities.
27. US intentions are clearly stated in the US Naval Institute publication: 'The Maritime Strategy', 1986.
28. See *Indochina Intelligence Report*, 1 September 1985. Also Bilveer, S., 'Gorbachev's Peace Offensive and Soviet Military Policy: Implications for the Asia Pacific Region', Asian Defence Journal, 8/89. While Cam Ranh Bay underwent a naval build-up in the mid-1980s less than 30 vessels generally operate from the base. Major units involved comprise only about 3 destroyers, a cruiser and

4 submarines. The rest are patrol boats and small auxiliaries. The SNA operates ageing BEAR and BADGER aircraft (2 squadrons totalling 24) which are mainly configured for EW, ASW and reconnaissance. An air defence squadron of 12-14 MIG-23 aircraft is also based at Cam Ranh Bay. This set-up hardly constitutes an offensive base. It is no comparison between Cam Ranh Bay and US Bases at Subic Bay, Yokosuka or at least four other locations in the Northwest Pacific.

29. Samoteikin Keynote Address, *Op cit.* p.12
30. Committee on Armed Services, US Senate, Fiscal Year 1985. Department of Defence Authorisations (Washington, DC: US Government Printing Office, 1984) p.3887.
31. *The Australian*, 'Threat and Counter Threat in war games around the Islands', World Review 3, 21 November 1985, p.11.
32. See, *The Australian*, 'Chinese Party Chief invited to Moscow', 13 September 1989, p.6.
33. Cited by Berton P., 'Soviet-Japanese Relations: Perceptions, Goals, Interactions', *Asian Survey*, December 1986, p.1279.
34. *Ibid*, p.1282. (Cited by P. Keal, *op cit*).
35. The first Soviet fisheries agreement with an Island state in the South Pacific involved Kiribati in 1985. The USSR found the arrangement unprofitable and failed to renew it.
36. The 'First Lesson' comprised China's 1979 invasion of Vietnam. Since then China has threatened another lesson (the 'Second Lesson') if Vietnam's behaviour, particularly with regard to Cambodia, did not improve.

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HMAS WESTRALIA underway in Cockburn Sound, Western Australia on December 20, 1989.

Photo: Navy Public Relations (WA)



HMAS WESTRALIA arriving at her new homeport, MHAS STIRLING on December 20, 1989 on her delivery voyage from the UK.

Photo: Navy Public Relations (WA)

USING MILITARY TECHNOLOGY FOR HUMANITARIAN ENDS

by

Gael M. Graham

Humanitarian principles are represented in public international, regional and national law. They define, inexhaustively, the standards which should be observed and, in some instances the means of effecting such observance, in order to ensure fundamental respect for human life and dignity. It is fair to say that all states support the notion of the observance of humanitarian principles — even when, to the unbiased observer, certain states disregard their application.

The classic loci of those humanitarian principles described as humanitarian law are the law of war and the law of armed conflict. Yet the notion of respect for human life and dignity is so fundamental that it pervades international law generally and is expressed in several of the discrete bodies of international law, among these, *jus ad bellum*, the law of peace, *jus in bello*, the law of armed conflict, cultural property law, the law of protection of cultural property, the law of the protection of the environment and human rights law. It seems, therefore, less cumbersome and more accurate to describe the legal expressions of humanitarian concerns as humanitarian principles. I will do so throughout this paper unless convenience dictates otherwise.

Concern for the integrity and dignity of the human person is not unique to the Western legal tradition, although it is sometimes viewed as such because the first codifications of humanitarian principles were prompted by nineteenth-century Western European wars. The Far East, the Indian subcontinent, Islamic countries, Africa and Latin America have developed principles of conduct in armed conflict.¹

The drafting of the two Protocols additional to the Geneva Conventions of 1977 [hereinafter 1977 Protocols]² included contributions from states representing various legal traditions. However, the working group and their subgroups did not meet publically: no records were kept, thus the essential parts of the decision-making process are not documented.³

Purposefully, the Conference on the Reaffirmation and Development of International Humanitarian Law applicable in Armed Conflicts, held at Geneva from 1974 to 1977 [hereinafter Conference]⁴ sought, wherever possible, to work by consensus. Thus, particular references to multicultural contributions cannot be cited.

In brief, humanitarian principles embodied in the law of war and law of armed conflict⁵ aim to protect persons and things not involved in the prosecution of that conflict from its more destructive effects. Thus those military *hors de combat* and civilians, together with the property of civilians (with certain exceptions), and most particularly property affected by a medical use or a religious, historic or scientific significance are, in the case of the former, supposed to be attended to when necessary or, in the case of the latter, spared. These prescriptions are not always observed, which is a generous way of stating that they are more often than not, disregarded, or regarded only to the extent that those conducting the war find it militarily expedient.

Some argue that the task of education of humanitarian law principles is not adequately fulfilled. I do not doubt that more could not be done by various bodies — the International Committee of the Red Cross [hereinafter ICRC], national societies of the Red Cross, Red Crescent and Red Lion and Sun, national armed forces — to educate those trained in the directing and fighting of wars in the basics of humanitarian law principles.⁶

But the simple fact of the matter is, a person does not really need to be taught the law in order to know what the law is: as is demonstrated by the embodiment of humanitarian principles in the legal systems of most, if not all, of the cultures of the world, and by the fact that in 1977, representatives of all of the international community's major legal systems, belief systems and

traditions, had no difficulty in agreeing to the codification of the fundamental humanitarian principles.

What the representatives disagreed about was (1) the extent to which these principles were likely to be violated, and (2) the extent to which states were willing to admit to certain constraints upon their conduct as sovereigns in order to ensure that the principles would be observed and the law enforced.

The disagreements may be irresolvable: neither will this paper attempt to resolve them. It will, rather, posit a low-level and apparently simply response: at Annex II are listed forms of military technology currently held by a geo-politically diverse group of states. This technology can be used to benefit non-combatants and their property during or subsequent to the prosecution of armed conflict.

I considered and rejected proposing the establishment of an agency to orchestrate the exchange or donation of equipment, as well as of satellite-generated imagery describing the location of protected persons and property. What the international community does not need is one more agency staffed with ineffectual bureaucrats selected not for their talents or commitments, but rather for their composite diversity. If statal or non-statal entities find it profitable — politically and economically — to make use of existing military technology to more effectively enforce humanitarian law, I believe that organization will take care of itself.

I do not believe it practical to argue in the face of overwhelming evidence to the contrary that humanitarian principles will be respected when a military situation would more profitably be resolved by ignoring them. Usually characterized as the doctrine of military necessity (or, more often to the multinational press and international bodies, as self-defense), this doctrine maintains the primacy of ensuring the belligerent's optimal military position: it is often invoked on the grounds of long-term conservation of life, both military and civilian.

The most horrendous example of this are the atomic bombings of Hiroshima and Nagasaki. I do not know and do not know whether anyone can know, whether the strategic decision to annihilate or maim hundreds of thousands of civilians did, in fact, spare more lives than were taken. The answer is not that the taking of life is not to be sanctioned — where there is war, there is death. We — the only ones who can — will never eliminate war. We are too greedy. Some questions have no answers.

In this paper, I will not, therefore, endeavour to demonstrate false the thesis that humanitarian principles are usually overridden by the requirements of military necessity. I will, however, offer some suggestions as to military technology that may be used to assist in the observance of humanitarian principles.

Usually not openly, but certainly covertly, the humanitarians heap as much scorn on the military as the military does on the humanitarians. The humanitarians view the military as largely war-win focussed to the disregard or near disregard of the concomitant death (of civilians generally and of the enemy's military in particular) and destruction resulting from the conflict. The military, on the other hand, characterize the humanitarians as starry-eyed and wildly idealistic, possessing little savvy of the ways things work in real war. The object of the game is to prostrate the enemy with as little damage to one's own resources as possible and in such a way as to perpetuate the post-conflict *status quo*.

The problem is not that the two sides seem so far apart, but rather that each side fails to recognize how close it is to the other. Both have an interest in ensuring the maximization of human resources and the minimization of physical damage. The military may be slightly more biased in favour of one side — which humanitarians purportedly are not — but not overwhelmingly so when this calculus is operative. Since the fundamental end of armed conflict is the exertion of some form of politico-ideological influence over the former belligerent or belligerents, ultimately the stronger belligerent or belligerents — where more than two belligerents are involved in an armed conflict — will benefit from having observed humanitarian principles: not thoroughly devastating the former opponent means that there will be something left over which to exert power.

Returning to the debates of the 1977 Protocols⁷: while the alignments observed therein apparently enjoy a byzantine symmetry when viewed issue by issue, they in fact break down along a simple divide: the haves with sophisticated technology and the have-nots without it. The latter particularly feared the spectre of internationally sanctioned interference (of the type they thought was envisioned by Protocol II): there is always the danger that one of the have-nots will be favoured by a state of more significant geopolitical power. This usually means that the conflict moves from one between two have-nots, to one between a have-not and a have — and subsequently to one between two haves: in other words between superpowers or proxies of superpowers.

Where there is a conflict in which at least one technologically have-not state is involved, commonly the military technology is isolated not only from the training component essential to its proper operation, but also from similarly sophisticated technology that is able to neutralize the effects of its hyper-accurate destructive capabilities.⁸ It is the worst of both worlds: an essentially low-technology operating mentality and capacity coupled with high-technology weaponry.

Highly sophisticated weaponry decontextualized from companion equipment and training raises the question of the scope of the application of humanitarian principles. While the technological sophistication of the belligerent-users would seem to argue for a space of military necessity as gross as that in the age of the iron-clad bomb, the weaponry alone suggests a much narrower area of operation of military necessity, and concomitantly, a larger space of operation of humanitarian principles.

Certainly the drafters and negotiators of the 1977 Protocols were aware or should have been aware of the proportionate shift in the ratio of destructive efficiency to humanitarian space. Yet the apparently clear cool lines of legal prose do not betray this knowledge. And undoubtedly this is one of the purposes of legal instruments: the presentation of a neutral face the particular characteristics of which are meant to be supplied as the need arises and according to the circumstances of the situation at hand.

Yet the practical question remains: given the prevalence today of the so-called low-intensity conflict⁹, what is the just and proper description of the scope of humanitarian principles. As a matter of practice and experience, it appears as though, in despite of the ubiquity of weaponry of greater sophistication, the zone of military necessity has not narrowed considerably. Public international legal interpretation regarding this peculiar shift in the scope of application of humanitarian principles is unclear. Nevertheless, it remains the obligation of the international community to ensure that humanitarian principles are observed.

The latter is a task not merely of negative obligations: it will not suffice for states to protest against the violations (or perceived violations) of belligerents to the relevant international bodies — against such deviant behaviour. Where states can, they should act affirmatively to safeguard the maintenance of humanitarian principles.

This may seem to be easier said than done. Particularly where even acts of affirmative maintenance of the law are bound to be subject to criticism of some sort, either domestic or foreign. Yet this paper offers a simple and eminently practical response to this dilemma: use the military technology in circulation — largely of the low-technology variety in order to minimize the level of training needed to operate it — to facilitate the observation of humanitarian principles.

Both statal and non-statal entities, eg military equipment manufacturers, for-profit and not-for-profit corporations, can participate in the donative effort. Donations of equipment of use in the evacuation, protection and resettlement of civilians, as well as in the protection of their immediate property and their cultural heritage, can be made either directly to the belligerents in question (the donees being responsible for the consequences of their assessment of the use or misuse by the recipients of the equipment) or to an international or regional agency trusted enough by the belligerents to administer the distribution of humanitarian assistance. A likely candidate for this task is the ICRC and its constituent national members. A listing of some of the equipment currently available for distribution is set forth at Annex II.

The obligation of a state under international law to ensure the application of humanitarian principles in the event of an armed conflict will be realized only to the extent that the politico-strategic intention of that state can accommodate the consequences of the obligation. As a practical matter, the character of the obligation observed rests with the commanders in the field, and their decisions, in turn, are influenced by the events unfolding in the arena of conflict.

The military technology responsible for the destruction in a conflict is also responsible for the observation of humanitarian principles. As self-evident as this proposition may be, it has not received the attention it deserves in the drafting of the instruments concerned with the application of humanitarian obligations in the event of armed conflict. Certainly the drafters were aware in general terms of the destructive capabilities of contemporary weaponry, but military technology experts were not relied upon sufficiently for their practical contributions in the crafting of the conventions. Moreover, the effects of the mixture of high- and low-technology equipment and methods of combat were not evidently accounted for in circumscribing the Janus spheres of military necessity and humanitarian principles.

Of the international bodies involved in the descriptive and prescriptive aspects of application of humanitarian principles during armed conflict, the International Committee of the Red Cross has consistently been active in exploring the potential uses of military technology for the implementation of existing conventional law. It has worked particularly in the area of signalling

of air- and seacraft bound on rescue or medical missions¹; the Annexes of the 1977 Protocols lent additional impetus to their projects ongoing in this area.²

Much more can and should be done. Additionally, attention must be directed to the legal and practical consequences of a much diminished sphere of operation of humanitarian principles where the sphere of military necessity has expanded owing to the hotpotch combination of high- and low-technology equipment, training and techniques.

Geographic distribution of military technology

The military procurement policies of the Eastern and Western alliances are steered by politico-strategic views which presume, each of the other, campaigns of influence over available political space worldwide. Traditionally, interest has concentrated predominantly upon the presumptive confrontation in the theatre of the two Germanies; scenarios of a global conflict radiate from that hub.³ Technologies and equipment development are driven by the supposed dimensions of that European conflict: these are largely sophisticated — characterized by computer technology, a purportedly high degree of accuracy as contrasted with comparable prior art, and a wide-ranging area of effectiveness. Both alliances have, as well, devoted some resources to the promotion of less-than-state-of-the-art technology and equipment, as well as to those deployed in the low-intensity and unconventional conflict environments. The Eastern alliance is far more active than is the Western in this regard, particularly with respect to the means of waging and protecting against chemical warfare.

While only a few years ago, the military equipment market was dominated by a handful of states — notably, the United States, the Soviet Union and, to a lesser extent, Brazil, the Peoples' Republic of China, and Yugoslavia, the number of states involved in the production and marketing of equipment and the level of involvement has increased dramatically within the past decade.

Politico-economic causes are responsible for this trend. As decolonization contributed to the number of states in the world community and movement such as the New World Economic Order contributed to the vitality, visibility and prosperity of that number, the smaller nations have at once acquired industrial bases and socio-political postures independent of the developed countries.

Among the intentionally conspicuous signs of that independence has been the acquisition of armaments; among the unintended consequences of those purchases have been manifold dependencies upon those very states from whom autonomy was sought. As a result, many of the states possessed of the industrial bases necessary to produce military equipment initiated their own production. Granted, the degree of sophistication of the equipment supplied from these factories cannot match that of the traditional arms suppliers, but neither can the prices of the latter compete with those offered by the recent entrants to the armaments market. Moreover, aside from those few glamour items — such as sophisticated aircraft, which those states that can — and often cannot — for the sake of national prestige afford to purchase, most developing states seek to acquire the more basic and low-technology items, such as mines, explosives and gas.

The effectiveness of low-technology items was evidenced by the events of the Iran-Iraq conflict of the 1980s. By purchasing from these less technologically sophisticated armaments producers, many smaller states can now obtain equipment of a relatively high standard from states whose socio-political orientation is much closer to theirs than is that of the larger arms producers.

The new presences are many: as an initial matter, Brazil, the PRC and Yugoslavia have stepped up their productions dramatically. The most remarkable of the troika is the PRC: since achieving independence in the 1940s, the state has devoted considerable resources to the erection of a formidable armaments industry; its model was the USSR. Having adapted Soviet designs to the anticipated specifications of their clients, the Chinese definitively penetrated the armaments market in 1984. Already, the client-base of the PRC is expanding: while much of the equipment obviously mimics its Soviet predecessors, the Chinese have succeeded in adding their own original touches and have, as well, produced equipment that is simple to operate, robust in its construction and far less expensive than its comparable counterparts.

Yugoslavia too has vastly improved the desirability of its products, providing now as have done most developed states for a number of years, service teams with their products sold. This increases the hard currency returns from third world states which find themselves after a time, bound to the contractor which originally sold them the equipment. Additionally, Yugoslavia has begun to expand the types of products it is marketing, including now as never before in the mix, construction equipment.

Singapore, South Korea and Pakistan are among the most aggressive new entrants to the market.

By participating in the large international defense exhibitions, they have increased their visibility and strengthened their credibility as serious arms producers. Singapore and South Korea now export equipment of a fairly high degree of technological sophistication. Pakistan, by contrast, is seeking to compete with the low-technology products of the PRC. It has made some inroads into the PRC markets, particularly with its novel designed land mine.

Not all new armaments producers derive from the developing states. South Africa initiated the trend in international marketing of armaments and has maintained it. Despite verbal disapprobation of South Africa policies, many states remain eager to acquire her technologically-sound items; these sales are generally covertly consummated.

Similarly, while Israel may suffer considerable overt political disparagement, many of those same speakers are far less critical with their armaments purse. There are some very healthy practical reasons for this, foremost among these being the combat testing of the equipment.

Too little known as an armaments producer is Chile. It has recently made available for export electronic warfare support equipment. Low-visibility Western-European-ally producers are Austria, Belgium and Sweden. In despite of agreements dating from as far back as the post-World War II era restricting the production and marketing of military hardware, Austria has most recently generated and marketed a number of relatively sophisticated items of heavy equipment. Belgium has created a niche for itself in the nuclear, biological and chemical [NBC] warfare arena.⁵ Various Swedish firms manufacture several types of electronic warfare support equipment. It is not known whether these are — or can be made — available for export. Japan has also become actively involved in electronic warfare support equipment production.⁶

Better known among the Western-European-ally military equipment producers are Canada, France, the Federal Republic of Germany and Italy. These states have traditionally manufactured a variety of military equipment, some of which has been, by design, destined for export. Other items have made their way into export currents in despite of voiced political intentions to the contrary.

Regulars to the defense supply market continue to be the United Kingdom, the USSR and the United States. Moreover, earlier generations of their equipment continue to circulate in the world markets. While it is true as a general matter that outdated Soviet equipment is most likely to settle in client or satellite states of the USSR, such is not ever the case. Conversely, obsolete British and United States equipment is not always confined to circulation among states friendly to the Western European outlook.

Typical recipient states of pre-owned equipment of British manufacture are Australia, Argentina, Chile, India, Indonesia and New Zealand. The United Kingdom also sells new equipment to several of these states, as well as to Finland, Norway, Oman and Sweden. Canada, on the other hand, exports new equipment to a number of Western-European-ally states including Belgium, Greece, the Netherlands and Portugal. To this list, the United States adds Egypt, Israel, South Korea, Spain and Turkey.⁷

Sufficient geo-political, pricing and product-type diversity exists among armament producing states to sustain a scheme whereby contributions of such equipment in support of humanitarian ends could be instituted in either an organized or an *ad hoc* fashion. The less sophisticated and more durable the equipment, the greater would be its effective life in conflict environments in which inadequate training and low-technology items and methods predominate. Moreover, the less technologically sophisticated the equipment, the less fear would be aroused on the part of technologically sophisticated states concerning a loss of armaments-construction secrets.

The Janus faces of military technology

Military technology is designed to participate in the acts of a conflict's destruction. Less elegantly put, its end is annihilation. Military technology's users will redirect its destructive capacities only to the extent that such redirection is militarily — that is to say, politically and strategically — prudent. To assume that humanitarian concerns rest in the fore of the military planner's mind is to live dangerously.

I am not wholly certain why those writing about the principles of humanitarian law apparently proceed in the belief that what they recount about the necessity of the written law will have some practical effect. Experience should have taught us by now the folly of this faith. Perhaps humanitarian lawyers are optimists by nature. Or perhaps they are pessimists who think that if they say what they believe should be often enough, it will be.

I believe that what we don't need is another tale of what should have been done that was not but will be during the next conflict if only everyone directing wars would nip off to their local library collection and bone up on humanitarian law. For informational purposes, I have

summarized the principles of humanitarian law.⁸ I have also recounted in gross the outlines of the discussions surrounding the 1977 Protocols, largely to point out how contingent upon geopolitics is the willingness of states to be guided by humanitarian principles.⁹

To the extent that I have bothered with the law at all, I have done so (1) to let readers know what it says; (2) because I am a lawyer, and therefore would like to ascribe some efficacy to principles embodied in texts agreed upon by states as a matter of custom and convention; and (3) because I cannot bring myself to believe that nothing of a legal-practical nature can be done to improve the present situation of virtual non-observance of humanitarian principles. (I, too, am at heart an optimist.)

I find myself faced with this dilemma. On the one hand, I would like to be able to argue in good faith, that absent the net of humanitarian principles agreed upon today by most states, there would be no stay upon the hand of those prosecuting armed conflicts and that the world would be a worse place than it is. Also, I am a lawyer and would like to believe that the law is worth somewhat more than the paper on which it is printed. On the other hand, living in the world has taught me otherwise.

I should like to be able to propose some sort of solution to the problem of non-compliance and under-compliance with humanitarian principles. My immediate impulse — as with most academic problem-solvers, and particularly those familiar with the agency-forming mentality of the United Nations (and other bureaucracies) — was to suggest the establishment of an agency.

My initial idea was that this agency would serve as a clearinghouse for information of relevance to the safe-guarding of humanitarian principles. States technologically sophisticated enough to be able to gather by satellite technology and other means information about the location, intensity and potential duration of an armed conflict would pass that information on to the agency, which in turn would be responsible for disseminating it to authorized international public servants charged with the maintenance of the observance of the principles of humanitarian law.

A host of potential difficulties attend upon this idea, not the least of which are: the unwillingness of technologically-sophisticated states to show their hand unnecessarily (that is, without the context of combat), the possible misuses of the information passed on, the fear that members of the agency would not be able to maintain their neutrality, but would "side" with one of the belligerent and might leak information unintentionally or otherwise, the very strong possibility that the agency would become a financial black-hole and practically worthless.

If I believed that states held the observance of humanitarian principles at the head of their list of things that ought to be done, I would be willing to disregard the nay- and doomsayers. But I do not believe so: what the international community absolutely does not need is yet another ineffectual agency.¹⁰

Nevertheless, I do believe that something can be done. Much of the military equipment in use today can be turned to benign purposes. That is to say, were prosecutors of armed conflicts to decide at some stage of the fighting that they wished to minimize the damage to non-combatants and their property, as well as to the cultural artifacts of the territory under siege, they could do so. And often by utilizing that same equipment that is used to destroy. Moreover, they could call upon trusted third states to pass on to them satellite-gathered information that would enable them to fulfill their obligation to observe humanitarian principles. For example, having learned of the movement of columns of refugees, a combatant entity could organize its bombing sorties in such a way as to avoid inflicting collateral damage on the caravan. Similarly, having garnered information about the extent and density of villages, or of the presence of cultural monuments, the combatant force could take measures to avoid, to the extent militarily practicable, such sites.

While the exercise may seem a rather straight-forward one, the Annex II surveys the Janus faces of military equipment and technology. Each of the listings of the equipment is followed, where appropriate by a brief description of the item, as well as by a bracketed indication of the country of manufacture.

Much of this equipment is manufactured and retained by the major arms-producing states of the NATO and Warsaw Pact allies, where it serves little direct combat purpose. It could be given or lent — directly and accompanied by a supervisory team — to third states engaged in armed conflicts. Alternatively, these states could place the equipment-services package at the disposal of organized peacemaking and peacekeeping missions or neutral regional or international bodies.

I have also purposefully selected for listing equipment derived from the less well-established armaments producers. Their presence suggests that many of the states members of the international community are capable of making a contribution to the restoration of peace and the maintenance of humanitarian principles in accordance with a general obligation to that end incumbent upon all states, and as that obligation is defined within the United Nations regime. The geopolitical

orientation of those states ranges to the extent that, if politico-ideological compatibility is critical, it would be possible to offer humanitarian assistance to states representing most, if not all, politico-ideological systems of the world.

Conclusion

The humanitarian principles embodied in international law developed by custom and convention over centuries of use. Belligerent sought to regulate and restrain their conduct in war not because they were nice, but because ultimately it redounded to their benefit to do so. Unfortunately, belligerent often disregard those same prescriptions because they calculate that they will be better off in doing so.

States members of the international community that fail first, to ensure that the victims of those violations are given succour, and second that the miscreants bear the consequences of their acts and omissions, are just as guilty of wrong-doing as the primary offending states. Such is the nature of international law: it must be self- and mutually-enforcing if it is to be law at all.

If nothing else, the debates surrounding the 1977 Protocols offered further proof that persons — in this sense, corporate rather than human — are willing to pledge to do good only to the extent that it does not cause them pain. Where armed conflict is concerned, this attitude can wreak disastrous consequences upon unrepresented and untold numbers of innocents.

I have made my rather pessimistic position clear: given the usually asymmetric configuration of contemporary conflicts, the space of military necessity is growing at the expense of the protections of humanitarian principles. Perhaps one day legal arguments will succeed in reversing this trend. It is, after all, the aim of civilization that dialogue replace bloodshed.

I do not, however, think that we should linger about waiting for that day to come. The quite simple proposal I have offered in Annex II of this paper suggests one practical way in which responsible states (and other persons) may act to better ensure that what have heretofore constituted respected humanitarian principles under international law continue to remain so.

ANNEX I

1.0 HUMANITARIAN PRINCIPLES APPLICABLE IN ARMED CONFLICT

1.1 Scope and history to 1864

Humanitarian principles bespeak those standards which should be observed, and in some instances, the means of effecting such observance, in order to ensure fundamental respect for human life and dignity. They are located throughout international law, and most evidently in *jus ad bellum* (the limitation of armaments and, in particular, the prohibition on the manufacture or acquisition of certain arms, the testing of arms, and the trade in arms, together with the neutralization, demilitarization and denuclearization of certain territories), *jus in bello* (the law of war), the law of armed conflict, cultural property law, the law of the protection of the environment, and human rights law.

Humanitarian principles applicable in situations of armed conflict, while found in each of the above-named bodies of law, have also been gathered together within the law of armed conflict — which term shall be used to comprise *jus in bello* and the law of armed conflict. Those humanitarian principles are given customary and conventional expression: the basic principles have achieved international recognition and acceptance; refinements of these fundamentals are represented in as-yet-unratified conventional documents and hortatory pronouncements of the United Nations Organization and the International Committee of the Red Cross.

The basic rules of humanitarian law in armed conflicts can be summarized as follows:

1. Persons *hors de combat* and those who do not take part directly in the hostilities shall be respected in their lives and treated with dignity and humanity and without any adverse distinction. An enemy who surrenders or who is *hors de combat* may not be killed or injured.
2. The wounded and sick shall be collected and cared for by the party to the conflict which has them in its power. Protection extends to medical personnel, establishments and equipment; the emblem of the Red Cross, the Red Crescent and the Red Lion and Sun signifies the protection owed and should be respected.
3. Captured combatants and civilians under the authority of an adverse party are entitled to respect for their lives, dignity and fundamental rights. They shall be free from and protected against all acts of violence and reprisals.

4. No person shall be subjected to any form of torture or cruel or degrading treatment; no person shall be held responsible for an act he or she has not committed.
5. Parties to a conflict and members of their armed forces do not have an unlimited choice of methods and means of warfare. It is prohibited to employ weapons or methods of warfare of a nature to cause unnecessary losses or excessive suffering.
6. Parties to a conflict shall at all times distinguish between the civilian population and combatants: neither the civilian population as such nor civilian persons shall be the object of attack; attacks shall be directed solely against military objectives. The civilian population and property shall be spared.¹⁰

In even more reduced terms: parties to an armed conflict shall respect the lives and fundamental dignity of those not taking part in or no longer taking part in the conflict: this includes civilians, the wounded, the prisoners-of-war, and others *hors de combat*. The property of civilians shall also be spared: the systematic starvation of the civilian population is forbidden; cultural, historical, medical and scientific edifices and sites shall not be attacked.

The humanitarian principles represented in the international law of armed conflict enjoy a long history: instances can be found in the past of many cultures describing military leaders who ordered their troops to spare the lives of captured enemies and to treat them well, to spare the enemy civilian population, to spare certain monuments of particular cultural value and, upon the conclusion of hostilities, of belligerent parties who agreed to exchange prisoners.

The practices gradually assumed a customary legal value: certain of these respecting the exchange of prisoners, the disposition of civilian populations which found themselves within the limits of a new international border, and the return of certain items of particular historical or cultural value, appeared increasingly in peace treaties concluded by former belligerents.

1.2 From the 1864 Geneva Conference to the 1949 Geneva Conventions

Finally, in the 1860's two wholly separate international conferences were convened to establish coherent sets of rules of warfare: one, in Geneva in 1864, treated the disposition of wounded soldiers on the battlefield; the other, in St Petersburg in 1868, concerned prohibitions on the use of explosive rifle bullets — limited, thereby, the means by which the parties could conduct the conflict.¹¹

From these conferences developed eventually law respecting two central concerns embodied in humanitarian principles: law concerned most particularly with the condition of war victims fallen into enemy hands (prisoners of war and interned civilians) and law relating to the conduct of war, including permissible means and methods of war. The latter found developed expression in the law of the Hague, the former in the law of Geneva.¹²

1.3 Developments leading to the 1977 Protocols

In the era of the United Nations [UN] regime, the Organization approached the issue of implementation of humanitarian principles in armed conflict from the perspective of respect for human rights.¹³ Under the guidance of the UN, the body of humanitarian principles was developed to include areas perceived to deserve particular attention in the post-World War II environment, among these, the protection of women and children, the position of journalists and the condition of liberation fighters in wars of national liberation. Their concerns were pragmatic and voiced reactively: by necessity, their focus were small-scale conventional conflicts.

The so-called law of New York¹⁴ built upon the fundamentals of the law of the Hague and of Geneva. It is law which takes account of the fact that the decolonization process resulted in an expansion of the international community — physically, intellectually and culturally. Beginning in the 1960's former colonial states became independent and individual actors, demanding on the one hand with respect for their cultural integrity and uniqueness from the community at large, and having on the other hand to cope with the formation of political systems suitable to their own needs at home.

By the 1970's, the UN confronted recent and ongoing examples of hostilities in the one-time Dutch East Indies, in Malaysia, in Algeria, in a series of colonies in Africa, in southern Africa — most notably in Namibia and South Africa, and in the Middle East, among others.

The states of the world body recognized the specter and the realization of these patterns of conflict: the first, of developed-country and, usually US or Soviet, influence or intervention in a less developed country (spontaneously, as part of a larger pattern of assistance, at the invitation or purported invitation of the host country), the second, of wars of national liberation in those

countries which has not yet achieved independence, and the third, of conflicts internal to the state.

The law of the Hague and of Geneva was drafted against the backdrop of large-scale conventional conflict. Nascent international law was wrestling with the implications of state nuclear power and nuclear capabilities, giving rise to largely apocalyptic and unpredictable issues: absent was law designed to deal with the types of conflicts which were proliferating daily.

The United Nations responded to its observation of current crises through its General Assembly and other main organs by issuing resolutions which, increasingly, justified the use of force in wars of national liberation, and declared additionally, that liberation wars constituted international armed conflicts. This entitles captured liberation fighters to prisoner-of-war status and, thus, to protection under existing law. It was this result upon which critical attention focussed. Disregarded in the politics of the moment, however, were the affected civilians and their property and the cultural property and environment of the embattled state which are, in situations of armed conflict, embraced within the protective prescriptions of international law.

In connection with the latter, the General Assembly did propound a series of resolutions in the 1970's which addressed the question of possible prohibitions or restrictions on the use of certain conventional weapons. The latter term designates weapons other than those belonging to the class of weapons of mass destruction — nuclear, chemical and bacteriological weapons. While the resolutions could not have the effect of preventing or limiting their use in fact, they did serve to keep date on the topic public and current, and undoubtedly, contributed to the gathering momentum prevalent in pertinent legal documents in various stages of drafting.¹⁵

It was the United Nations which stepped in to bring the application of humanitarian principles current with reality. As much as the world body may be criticized for its politicization of issues which it handles, the fact remains that without its attention-grabbing urgings, states may not have agreed to reconsider the status of humanitarian law. The ICRC had also, at least since the early 1950's, been advocating the adoption of rules which would offer more adequate protection to the civilian population during periods of hostilities. Given that all of its humanitarian relief efforts during the decades of the 1950's, 1960's and early 1970's took place within the context of limited-scale conflicts — many of these not involving an international-frontier-crossing incident, the ICRC was bound to keenly support an updating of humanitarian law.

In the early 1950's, the ICRC propounded a set of draft rules for the protection of the civilian population against the effects of war. In 1955 and again in 1956, it was forced to table its considerations: at the height of the Cold War, many governments were not prepared to discuss topics of such strategic significance as the conduct of aerial bombing and the use of nuclear weapons — the reference in the draft rules to the latter was disguised but capable of perception.

Nevertheless, in 1965, at the XX International Conference of the Red Cross held in Vienna, Resolution XXVIII confirmed faith in the following principles:

- that the right of the parties to a conflict to adopt means of injuring the enemy is not unlimited;
- that it is prohibited to launch attacks against the civilian population as such;
- that a distinction must be made at all times between persons taking part in the hostilities and members of the civilian population to the effect that the latter be spared as much as possible;
- that the general principles of the law of war apply to nuclear and similar weapons.¹⁶

Finally, in December of 1968 — undoubtedly influenced by the events in Vietnam — the UN General Assembly adopted Resolution 2444 (XXIII).¹⁷ It repeated and reaffirmed the principles for the protection of the civilian population embodied in the 1965 ICRC Resolution — except that concerning the use of nuclear weapons since the General Assembly had earlier addressed those concerns in its Resolution 1653 (XVI) (declaring unlawful the use of nuclear weapons)¹⁸ and called upon the Secretary-General to carry out its studies "in consultation with the International Committee of the Red Cross". The Resolution emphasized that the General Assembly had finally rejected the concept of coercive warfare, that is, the method of waging war against the population in its entirety in an attempt to force the capitulation of the adversary.¹⁹

The philosophy underlying the Resolutions passed by the ICRC and the UN General Assembly is that of primary respect for the fundamental rights and dignity of man within the context of a situation of armed conflict. It affected the tone and substance of the discourse of the Diplomatic Conference convened to restate and update the humanitarian law applicable during armed conflict.

1.4 The 1977 Protocols: a brief drafting history of the 1977 Protocols

The Diplomatic Conference on the Reaffirmation and Development of International Humanitarian Law Applicable in Armed Conflicts convened in Geneva in 1974 at the invitation of the Swiss

Government. Considering the debate within the United Nations and the ICRC concerning the rules of combat as expressed in the law of the Hague and the protection of war victims as expressed in the law of Geneva, the ICRC furnished draft texts to the Conference.

Working with these over the course of four sessions, the Conference drew up two treaties: Additional Protocols to the 1949 Geneva Conventions, Protocols I and II. Protocol I protects the victims of international armed conflicts; Protocol II protects victims of internal armed conflicts. The term victim embraces all those *hors de combat*, prisoners of war and civilians.

The Conference adopted the two Protocols on 8 June 1977; they were signed later that year in Berne by 62 states. Of these, 4 signed Protocol I only. The signatories constituted a representative sampling of all geo-political persuasions. The Protocols entered into force on 7 December 1978, six months after two instruments of ratification had been deposited with the Swiss Government. As of 15 July 1987, 68 states had ratified or acceded to the Protocols. Of these, 5 ratified or acceded to Protocol I, and 2 to Protocol II only.²⁰

The Conference adopted as well six further resolutions: three concerned the identification of medical transports, and urged states to ratify the Hague Convention on cultural property, one concerned dissemination, and two were largely formal approval of the report of the Credentials Committee and a expression of gratitude to the host country.²¹

1.5 Humanitarian principles applicable in armed conflict: law-making in politico-strategic context

The task of the Protocols' drafters was not to change the law, but rather to more effectively implement, within a single, coherent framework, those humanitarian principles which, being recognized as valuable and accepted as valid by the majority of states, ought to be brought to bear in armed conflict. The law of the Geneva Conventions needed to be restructured so as to accommodate physical and philosophical changes within the international community since the Second World War.

The four Geneva Conventions present us with a complex body of rules developed over an extended period of time and resting upon a few fundamental presumptions concerning the value and dignity of human life. In drafting rules which would ensure the currency and susceptibility of implementation of these fundamental presumptions, the Conference did not desire in any way to impair the effectiveness of existing rules. Yet, because the new provisions had to conform to and interlock with existing texts, careful and often seemingly convoluted drafting resulted. Conference discussions cleft not so much along the East-West divide, as along North-South lines (although Norway, almost consistently, aligned itself with the Southern players). Debate centered on four issues: (1) the participation of liberation movements in the Conference; (2) the status of wars of national liberation, that is, whether wars of national liberation should be classified as international armed conflicts; (3) more adequate protection for the victims of non-international armed conflicts; and (4) dispute settlement and control of the application of the law.

The attitudes espoused by the states participants on each of the issues — although, except for the third, not directly related to the rationale of support for humanitarian principles of law — will, undoubtedly, drive the politico-strategic direction of the application of humanitarian principles in future armed conflicts. This is so regardless of whether the state signed or ratified either of the two Protocols.

The first session of the Conference was occupied largely with the question of the participation of national liberation movements. Following four weeks of negotiations, the Conference invited liberation movements recognized by intergovernmental regional organizations to participate in the Conference. They were accorded a status that entitled them to speak and to offer proposals, but not to vote. Eleven liberation movements contributed to Conference discussion, although only the Palestine Liberation Movement and the South West Africa Peoples' Organization attended each of the four sessions.

The next preoccupation of the Conference was the shape of article 1, paragraph 4 of Protocol. The latter assimilated "armed conflicts in which peoples are fighting against colonial domination and alien occupation and against racist regimes in the exercise of their right of self-determination", to article 2 common to the 1949 Geneva Conventions, that is, international conflicts. The first session closed with a highly controversial vote, in which the above formulation was adopted.

The issue of liberation movement status erupted again in the final session when the question as to the signatory capacity of national liberation movements arose. Western states objected to legitimizing national liberation movements by allowing them to sign the Final Act of the Conference along with the other states. The compromise allowed liberation movements to sign a separate sheet titled "National Liberation Movements Recognized by the Regional Intergovernmental

Organizations Concerned and Invited by the Conference to Participate in Its Work". Moreover, a footnote was added which read: "It is understood that the signature by these movements is without prejudice to the positions of participating States on the question of a precedent". As a result of the compromise, the Final Act was adopted with only one negative vote, that of Israel, which did not, consequently sign the Final Act.²²

The compromise represented one of the few hard instances in which — in result, if not in fact — the application of humanitarian principles overrode political postures.²³ Another of the evidently hard instances in which humanitarian principles superceded politics was the question of more adequate protection for the victims of non-international armed conflicts posed by Protocol II. Although they ultimately lost their point, Third World states refused to compromise on this issue. They viewed it as one on which they had everything to lose. Western states, on the other hand, acquiesced to the provision because they thought they had so little to lose and so much to gain. In this debate, the Socialist states aligned with the Western industrialized states. Given the potential for internal dissension that the restructuring of the Soviet and Eastern bloc societies — except the German Democratic Republic and, to a lesser extent, Bulgaria — has aroused, these states may one day regret their generosity.

Third World States, in particular, feared that their stability would be undermined were they to accept Protocol II's prescriptions. Already in the early sessions of the Conference discussions, a number of Latin American, Asian and African states feared that the two-pronged definition of armed conflict — (1) negative, that is, not situations of internal disturbance and tensions; and (2) positive, that is, non-interstate conflicts that take place between armed groups or other organized groups under responsible command — would encourage foreign interventions and endanger state sovereignty, as well as impair their ability to deal with internal matters unhampered by international obligations. Ultimately in the final stages of the Conference, this bloc of states succeeded in impairing significantly the potential efficacy of Protocol II.

The North-South split permeated to other aspects of the discussions concerning victim protection: negotiations concerning combatants and prisoner-of-war status, methods and means of combat, weaponry prohibitions and limitations, and the protection of the civilian population against the dangers of hostilities were dominated by the Vietnam conflict. An overwhelming sense of good-little-developing guy *versus* bad-big-industrialized guy influenced the attitudes of the delegates to the Conference. Low-technology guerilla tactics were opposed to methods of high-technology warfare. The Vietnam conflict was *sub silentio* held up by many states as the paradigmatic asymmetric conflict: between the little-low-technology-developing country and the big-high-technology-industrialized country.²⁴

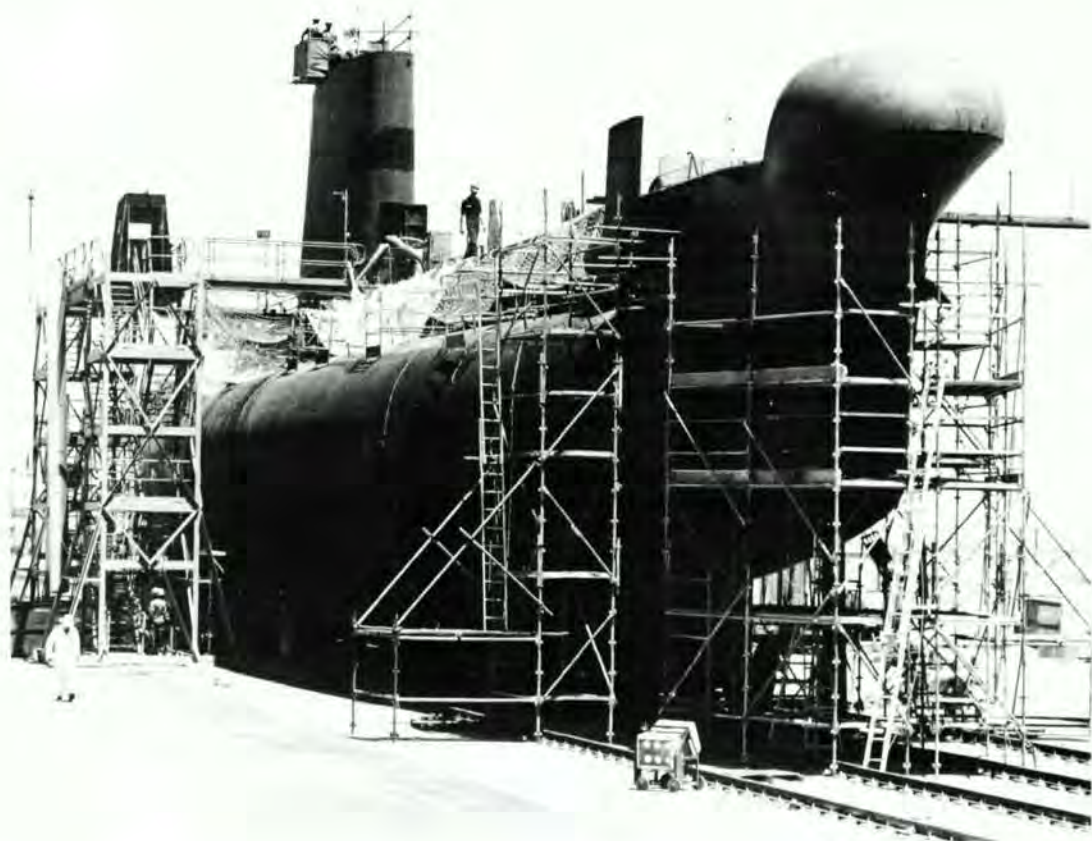
Yet, considering the conflicts of the post-World War II era as a whole, Vietnam was an anomaly. By contrast to Vietnam (and now Afghanistan), the majority of conflicts have involved belligerents either that have been somewhat asymmetrical equipped, or that have been equipped with some high-technology equipment, absent and requisite training and the additional equipment needed to render the equipment on hand efficacious for the purposes intended.

In either case, it is not wholly clear that the legal manifestations of the Vietnam paradigm or of the less asymmetric conflicts were either thought through or integrated into the consequent instruments. As discussed above, it can be argued that the use of high technology equipment reduces the space of military necessity and increases that of humanitarian protections, and conversely, that the embrace of low technology guerilla methods of warfare increases the space in which military necessity operates and decreases that in which humanitarian protections are guaranteed by law. But what about the instances in which some high-technology equipment is being used, or underused or misused, and those in which high-technology equipment is being deployed in an overwhelmingly low-technology theatre of combat.

I believe that the lower of the two standards drives battlefield conditions and that a grossly shrunken space for the operation of humanitarian principles survives. I believe as well that the way to preserve humanitarian principles for its beneficiaries is not through more legal prose or through the establishment of another international agency. Rather, the military equipment that exists can be used to ensure that the maximum possible scope for humanitarian protections is afforded.

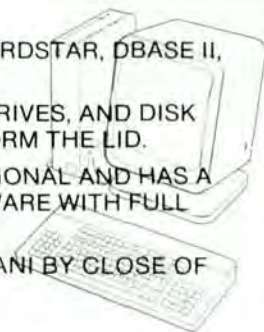
What this requires is a little imagination and some informal cooperation among statal and non-statal entities and belligerents. Section 3 of the paper sets forth a preliminary list of military equipment which may be used to ensure the observation of humanitarian principles, together with some suggestions as to how it may be distributed. Above all, however, the implementation of humanitarian obligation demands good will on the part of the belligerents and a willingness to disinclude civilian demoralization and annihilation from military planning.

(to be contd)



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MILCODE SECURE VOICE TERMINAL

by

Neal O'Farrell

"A secure telephone capable of encrypting voice and data communications to the highest level"

In 1984, the US National Security Agency (NSA) sponsored four major electronics companies to the sum of \$44m to develop a secure telephone capable of protecting Military, Government and commercial telephone conversations. The companies set to work and in 1989 were able to demonstrate their solutions. The NSA estimated the demand for such a secure telephone in the United States alone, would be worth between \$1.5bn and \$3bn.

In 1989, an Irish company, specialising in secure communications, developed their own secure telephone. The difference between their proposal and that of the NSA was that the Irish made product was to be:

- vastly more secure than any other secure telephone
- more versatile
- unique to each customer and
- still cost the same as, or less than other secure telephones at this level.

The company, Intrepid Ltd, brought together a team of some of the top specialists in this field in Europe, and combined with their own expertise, developed a secure voice terminal they called Milcode. The system is being hailed as a great advance in secure telephone technology and is rapidly establishing this small company in the international field of secure communications.

The business of encryption is growing worldwide. The objective is to protect information or secrets which can range from a private conversation between two business people or the electronic transfer of funds from one bank to another, to discussions of military, political or economic strategy of a government.

Obviously, there are different threats to different forms of information but the most difficult information to protect is that of a government or military nature. The reasons are primarily that the information is highly confidential and sensitive, and the resources available to intercept the information are usually substantial.

Just as the threats to information are increasing at a rapid rate, so the technology of encryption has improved dramatically. Until recently, the highest security encryption systems were large cumbersome rack mounted devices which consumed large amounts of power. They were not portable and required significant expertise to operate.

Milcode changed this. By designing the system around some of the most advanced technology available Milcode has been reduced to the size of a desktop telephone, yet it has the processing power of the largest computers. This may seem like overkill, but such is the processing power needed to implement the complex algorithms at the heart of modern encryption. Milcode is based around fast digital signal processors, similar to those found in modern radar, satellite and weapons guidance systems.

Milcode will encrypt both voice and data at speeds up to 9600 bits per second. The system incorporates one of the most advanced V.32 modems, and will fall back to slower speeds if the line is poor, yet still retain excellent voice quality. Voice quality has been a bone of contention with users of voice encryptors.

To convert the human voice into a form that can be manipulated and transmitted effectively, the voice must first be analysed and com-

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pressed. This is achieved using complex algorithms to code the voice. The "Vocoding" (voice coding) has to date usually been based on a technique called Linear Predictive Coding (or LPC). However when the compressed LPC voice is reproduced at the receiving end, it resembles synthetic Donald Duck speech, obviously causing problems for the user. Also LPC cannot easily accommodate certain types of voices, particularly female, non english languages, background noises etc. The result is that most modern encryption systems using speech coding are disliked by the user and only aggravate communications problems.

To overcome this significant weakness, the designers of Milcode decided to use a much more complex but also more effective form of voice coding, known as Code Excited Linear Prediction. CELP eliminates all the problems encountered by LPC, reproducing almost perfect human speech without the usual distortion. Again it is the processing power of Milcode that made CELP a feasible option.

The decision to use CELP was vindicated when in 1989 both the US Department of Defence and NATO chose CELP as the new standard for voice coders, in preference to other voice coding algorithms including LPC.

The most important feature of any encryption device is the level of security it offers, and once again the designers of Milcode were innovative. The basic encryption algorithm is a complex non linear block cipher with a base key of 512 bits. Each customer can be supplied with a unique version of the algorithm thereby increasing dramatically the security of the system. Alternatively, the customer can specify and supply their own algorithm, and change this algorithm regularly to maintain effective security. For Key Management, Milcode uses its own proprietary Distributed Public Key technique. Each Milcode generates its own key for each individual call so that should the key be broken or compromised, only that single call will be vulnerable. The technique is invulnerable to the active wire tap, the most serious threat to public key systems.

To ensure maximum security, all 512 bits of the key are used for each secure call made. The computational resources need to break this single message is the subject of much debate, but a fair estimation can be made.

Consider a popular and widely used encryption algorithm such as the Data encryption Standard, or DES. This algorithm uses a 56 bit key, and is generally regarded as secure. For every additional bit you add to the key length, you double the amount of time needed to break the total key (by exhaustive search).

Using the best of existing and projected technology it would take many billions of years to break such a key, presuming the algorithm itself is structurally sound. To make matters more difficult, in breaking the key, an attacker would only break that single call.

In addition to the high level of encryption, key management is much simpler, given that no keys need be manually generated, or distributed to users. Security is increased even more by the use of custom codes unique to each user, a token to authenticate the user to the system, and a pin number of gain access. Yet despite this, user operation is a simple single button operation, with all the processing occurring in the background. The system is full duplex so users feel as though they are using a standard telephone.

To design Milcode, Intrepid brought together a team most security organisations would envy. They include specialists in digital signalling processing, telecommunications, speech coding, cryptography and mathematics. Additional consultants were brought in from Irish Universities, and a number of retired senior Army officers lent their expertise. The qualifications of the team are unquestionable, for example, some of the signal processing advisers first started working in this field in 1973, before DSP was an established technology. Other team members completed masters programmes on RSA, the popular Public Key algorithm, and attended a number of courses given by Dr Carl Meyer, the co author of the DES algorithm. In fact, Dr Meyer was a speaker at an encryption conference run jointly between Intrepid and IBM in Ireland. Intrepids security team have also participated in European Commission projects for a number of years, including MARS, ESPRIT and COST 11.

Intrepid has significant expertise in encryption and has over the last number of years, specialised in encryption and communications security, supplying encryption products to, amongst others, all the major Irish banks. The company now works closely with Government and Military users of encryption systems, advising on the security of communications including telephone, radio and cellular applications, for both voice and data.

One major advantage the company has is that it is not bound by restrictions on the development, sale or export of encryption products. It can therefore implement algorithms and key management techniques not normally available in other countries. This is particularly useful to organisations looking for proprietary encryption systems unique to their

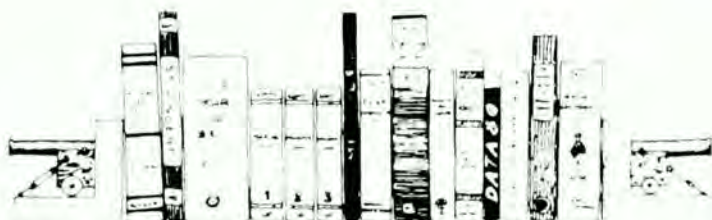
own applications without the additional cost of customisation or expensive development.

As a result of the initial successful testing

of Milcode, the company has been approached by a number of overseas agencies to develop specific encryption solutions.



BOOK REVIEWS



A LEAF UPON THE SEA: A SMALL SHIP IN THE MEDITERRANEAN, 1941-1943

By Gordon W. Stead

(University of British Columbia Press 1988 ISBN 0-7748-0299-5)

The contribution of the ubiquitous motor launch to victory at sea in the Second World War is one that has long been underestimated. Yet hundreds of craft, built in practically every country of the British Commonwealth as well as the United States, saw action in every theatre of the war. With a heavy AA and ASW armament for their size, as well as an often improvised minesweeping capability, the motor launches were indispensable in a multitude of roles.

Gordon Stead's remarkable book goes some way towards remedying the situation. His tale of the "Fairmiles" in the Mediterranean is one of steady endeavour and endurance against considerable odds. Stead himself won the DSC and Bar for his part in the siege of Malta and he describes his activities in an understated but engaging manner which makes very clear how much the motor launches depended for their efficiency on close co-operation and teamwork on the part of their crews. The transit of the motor launches from Gibraltar to Malta in March 1942 seems, for example, a small matter until the chart is inspected and the enemy's capabilities assessed. Similarly, the minesweeping operations at Malta must be understood in the context of desperately limited resources matched against near-continuous air attacks.

Stead's tale of the conversion of *ML 126* and her sisters into "craft of opportunity" minesweepers must have a few lessons for contemporary mine warfare officers. Stead notes of one field, "Before we were through, *126* passed over six mines our lookouts saw, and I never quite got over my concern for the accuracy

of the depth-setting devices in the mines." The

Something of Stead's quality is obvious from the day in which he struck up relationships with the most senior British officers and it is no surprise that this "amateur" sailor should have eventually come to the senior civil servant responsible for the Canadian Coast Guard nor that he should number amongst his degrees that of Doctor of Law. Although it is a very different book, Stead's work matches that on landing craft in the Mediterranean *To Sea in a Sieve* by actor Peter Bull, also a holder of the DSC.

battle of wits between the minesweepers and the E-Boats which laid their mines by night and added ever more sophisticated anti-sweep devices as they did so, must be a sharp reminder that mine warfare can be a much faster moving game than we like to admit. Furthermore, mine clearance operations may well have to be conducted in a hostile environment in the present day.

A Leaf upon the Sea is highly recommended as the best memoir of the war to appear for many years. It will certainly be of interest to the RANR and RANVR veterans of the 35 RAN Fairmiles and 28 harbour defence motor launches whose employment in New Guinea and the South West Pacific had so many parallels to the Mediterranean. Just as important, however, will be its relevance to contemporary MCM and minor war vessel work. This is a book which deserves to be read.

James Goldrick

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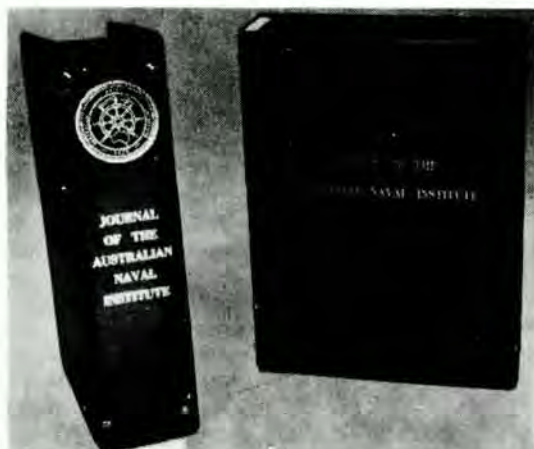


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