

U.S.I. JOURNAL

INDIA'S OLDEST JOURNAL ON DEFENCE AFFAIRS

(Established : 1870)



PRINCIPAL CONTENTS

- Managing Nuclear Opposition : Reflections - *Sir Michael Quinlan*
Upon Cold War Experience
- Brinkmanship of North Korea and its - *Major General Ashok Joshi,*
Stand Off with the USA *VSM (Retd)*
- Reflections on India's Nuclear Doctrine and - *Rear Admiral Raja Menon (Retd)*
Command and Control
- Taiwan : Strategic Assessment 2003 - *Lieutenant General Vijay Oberoi,*
PVSM, AVSM, VSM (Retd)
- Managing Technology – A Challenge - *Captain Rakesh Vadhyar*
for the Future
- Indian Air Force and Technology - *Air Vice Marshal SC Rastogi,*
AVSM, VSM (Retd)
- Disquiet on the Western Front - *Shri EN Rammohan, IPS (Retd)*
- Ethno Nationalism in North Eastern India - *Brigadier R S Grewal, VSM (Retd)*

APRIL-JUNE 2003

ALL RIGHTS RESERVED © Rs. 75.00 PUBLISHED QUARTERLY

USI PUBLICATIONS

USI NATIONAL SECURITY PAPERS

Code	Subjects	Price (Rs.)	Year
P-15	Future Conflict, Clash of Civilisations-Validity of Huntington's Thesis and the Security Challenges of this Paradigm to India by Shri J N Dixit, IFS (Retd).	50.00	1998
P-16	Mass Media and National Security by Lt Gen K Balaram, PVSM (Retd).	75.00	1999

USI NATIONAL SECURITY LECTURES

L-16	Combating Technology Control Regimes by Dr APJ Abdul Kalam.	75.00	1996
L-17	The Genesis of the Insurgency in Jammu and Kashmir, and in the North East, and Future Prospects by General KV Krishna Rao, PVSM (Retd).	75.00	1997

USI NATIONAL SECURITY SEMINARS

S-17	Non-Military Threats to Security in South Asia.	100.00	1995
S-18	Impact of Decreased Defence Spending on the Indian Armed Forces.	100.00	1997
S-19	Security Concerns in Asia in the Early 21st Century, Global Disarmament and the Indian Ocean Rim.	100.00	1996
S-20	The Challenges to India's Foreign and Defence Policies in the Transformed International Power Equations.	100.00	1999
S-24	Joint USI-CIISS (China) Seminar – Asian Security and Role of Outside Powers in the Region.	75.00	2001
S-25	Joint USI-NCMES (Egypt) Seminar Regional Security, International Intervention, NMD System and Its Implications, and Bilateral Relations Between India and Egypt.	100.00	2002
S-27	Joint USI-FES (Germany) Seminar Security Environment in Southern Asia.	100.00	2002
S-28	USI Seminar held at Chandigarh Security Challenges of India in the Regional Context with Special Reference to Terrorism – Prognosis and Response.	100.00	2002

USI NATIONAL SECURITY SERIES - 1998

350.00 1999

NS Lecture (L-18)	(a)	The Influence of Contemporary Politics and Societal Changes on the Indian Armed Forces : Likely Implications and Need for Institutional Corrective Measures by Admiral V S Shekhawat, PVSM, AVSM, VrC (Retd).
NS Seminar (S-21)	(b)	Restructuring of Intelligence Agencies.
NS Paper (P-17)	(c)	The Organisation and Concepts of Employment of Strategic Rocket Forces. by Lt Gen PK Pahwa, PVSM (Retd).

USI NATIONAL SECURITY SERIES - 1999

350.00 2000

NS Lecture (L-19)	(a)	A Nuclear Strategy for India by Dr C Raja Mohan.
NS Seminar (S-22)	(b)	Privatisation of Logistics Support Facilities.
NS Paper (P-18)	(c)	Terrorism : The Challenge to India's Security by Shri MK Narayanan, IPS (Retd).

(Continued at inner back flap)

ISSN 0041-770X

The
Journal
of the
United Service Institution
of
India

Published by Authority of the Council



(Established : 1870)

Postal Address :

Rao Tula Ram Marg, (opposite Signals Enclave)
Post Bag No 8, Vasant Vihar PO, New Delhi-110057
Telephone No. 26146755, 26146490 Fax: 26149773

e-mail : dirusi@nde.vsnl.net.in

ciusi@vsnl.net

libusi@vsnl.net

usilib@hotmail.com

usicunpk@sifi.com

Website : www.usiofindia.org

Vol CXXXIII

April-June 2003

No 552

USI Journal is published quarterly in April, July, October and January.
Subscription per annum : In India Rs. 250.00. Subscription should be sent through Bank Draft/Local Cheque/Postal Order in favour of Director USI of India. It is supplied free to the members of the Institution.
Articles, correspondence and books for review should be sent to the Editor. Advertisement enquiries concerning space should be addressed to the Director.

For overseas subscriptions, trade enquiries and advertisements write to : Spantech & Lancer, Spantech House, Lagham Road, South Godstone, Surrey RH9 8HB, UK.
Overseas annual subscription (By Air Mail) - £ 40 or \$ 65
Tel : +44 1342 893239 Fax : +44 1342 892584

**UNITED
SERVICE
INSTITUTION
OF INDIA**

*the furtherance of
interest and knowledge
in the art, science and
literature
of National Security
in general and of the
Defence Services
in particular*

for

VICE-PATRONS

Admiral Madhvendra Singh, PVSM, AVSM, ADC
Chairman COSC and Chief of the Naval Staff

General N C Vij, PVSM, UYSM, AVSM, ADC
Chief of the Army Staff

Air Chief Marshal S Krishnaswamy, PVSM, AVSM, VM & Bar, ADC
Chief of the Air Staff

COUNCIL

President

Lt Gen P S Joshi, PVSM, AVSM, VSM, ADC
Chief of Integrated Defence Staff to Chairman COSC

Vice Presidents

Lt Gen Shantonu Choudhry, AVSM, VSM, ADC, VCOAS
Vice Adm J C DeSilva, PVSM, AVSM, ADC, VCNS
Air Mshl McMahon, PVSM, AVSM, VM, ADC, VCAS

Ex-Officio Members

- Shri Ajay Prasad, IAS, *Defence Secretary*
Air Mshl G C S Rajwar, AVSM, VrC, VSM, *DCIDS (DOT)*
★ Maj Gen H S Panag, *Offg DGMT*
★ Cmde Ajay Parmar, *DNT*
★ Air Vice Mshl AK Singh, AVSM, VM, VSM, *ACAS (Trg)*

Elected Members

- Air Mshl KC Cariappa, PVSM, VM (Retd)
★ Vice Adm PS Das, PVSM, UYSM, VSM (Retd)
Lt Gen RS Dayal, PVSM, MVC (Retd)
★ Shri Chinmaya R Gharekhan, IFS (Retd)
★ Lt Gen AS Kalkat, SYSM, PVSM, AVSM, VSM (Retd)
★ Vice Adm IJS Khurana, PVSM (Retd)
Lt Gen Yuvraj Mehta, PVSM, AVSM (Retd)
★ Air Mshl Vir Narain, PVSM (Retd)
★ Lt Gen V K Nayar, PVSM, SM (Retd)
Lt Gen Vijay Oberoi, PVSM, AVSM, VSM (Retd)
★ Lt Gen Vinay Shankar, PVSM, AVSM, VSM (Retd)
Lt Gen Mathew Thomas, PVSM, AVSM, VSM (Retd)
★ Shri NN Vohra, IAS (Retd)

Member Secretary

Lt Gen Satish Nambiar, PVSM, AVSM, VrC (Retd)
Director

EXECUTIVE COMMITTEE

Chairman

Air Mshl G C S Rajwar, AVSM, VrC, VSM, *DCIDS (DOT)*

Members

Local Council Members, Indicated by ★

Member Secretary

Lt Gen Satish Nambiar, PVSM, AVSM, VrC (Retd)
Director

CENTRE FOR RESEARCH BOARD OF MANAGEMENT

Air Mshl Vir Narain, PVSM (Retd) Chairman

Maj Gen H S Panag

Offg DGMT

Cmde Ajay Parmar

DNT

Air Vice Mshl A K Singh, AVSM, VM, VSM

ACAS (Trg)

Lt Gen S S Chahal, PVSM, AVSM, VSM

Commandant, NDC

Shri K Santhanam

Director, IDSA

Shri Sanjaya Baru

Shri Chinmaya R Gharekhan, IFS (Retd)

Vice Adm P J Jacob, PVSM, AVSM, VSM (Retd)

Lt Gen Vijay Oberoi, PVSM, AVSM, VSM (Retd)

Dr V Siddhartha

Air Cmde Jasjit Singh, AVSM, VrC, VM (Retd)

Shri N N Vohra, IAS (Retd)

Lt Gen Satish Nambiar, PVSM, AVSM, VrC (Retd)

Director, USI

Member Secretary

CENTRE FOR ARMED FORCES HISTORICAL RESEARCH BOARD OF MANAGEMENT

Lt Gen Mathew Thomas, PVSM, AVSM, VSM (Retd)

Chairman

Maj Gen A S Bahia, AVSM and Bar

ADGMO (A)

Maj Gen H S Panag

Offg DGMT

Rear Adm R F Contractor, NM

ACNS (IW & Ops)

Air Vice Mshl B N Gokhale, AVSM, VM

ACAS (Ops)

Vice Adm Inderjit Bedi, PVSM, AVSM (Retd)

Air Mshl Bharat Kumar, PVSM, AVSM (Retd)

Lt Gen Satish Nambiar, PVSM, AVSM, VrC (Retd)

Director USI

Director History Division, MOD

Coopted Member

Sqn Ldr RTS Chhina

Research Associate

Officiating Secretary

CENTRE FOR UNITED NATIONS PEACEKEEPING BOARD OF MANAGEMENT

Lt Gen Shantonu Choudhry, AVSM, VSM, ADC **Chairman**
VCOAS

Lt Gen J B S Yadava, AVSM, VrC, VSM
DCOAS (T & C)

Maj Gen K S Jamwal, AVSM, VSM & Bar
Addl D G Staff Duties

Rear Adm R F Contractor, NM
ACNS (IW & Ops)

Air Vice Mshl P P Rajkumar, AVSM
ACAS (Ops)

Maj Gen H S Panag
Offg DGMT

Comde Ajay Parmar
DNT

Air Vice Mshl A K Singh, AVSM, VM, VSM
ACAS (Trg)

Shri B S Prakash, IFS,
JS (UNP), MEA

Shri Alok Sinha, IFS
Director (Finance), MEA

Shri Arvind Joshi, IAS,
JS (G), MOD
Rep ARTRAC

Vice Adm Inderjit Bedi, PVSM, AVSM (Retd)

Air Mshl Vir Narain, PVSM (Retd)

Lt Gen A S Kalkat, SYSM, PVSM, AVSM, VSM (Retd)

Lt Gen Satish Nambiar, PVSM, AVSM, VrC (Retd)

Director USI

Col R K Rajput

Coordinator cum Secretary

USI STAFF APPOINTMENTS

Director

Lt Gen Satish Nambiar, PVSM, AVSM, VrC (Retd)

Dy Director & Editor
Maj Gen Y K Gera
(Retd)

Chief Instructor
Brig M S Chowdhury
VSM (Retd)

Dy Director (Adm)
Col V K Singh
VSM (Retd)

Research Associate
CAFHR
Sqn Ldr R T S Chhina
(Retd)

Coordinator cum
Secretary, CUNPK
Col R K Rajput

Librarian
Shri I R Kumar

DS Coord
Lt Col V S Bharthlae

Sr. Accountant
Shri R C Mittal

Research Coordinator
Dr Sudha Raman

Supdt Courses Section
Shri B David

Supdt Adm Section
Sub Maj and Hony Capt
Daibir Singh (Retd)

Editorial Assistant
Col PK Gautam (Retd)

Estate Manager
Shri H M Robertson

CONTENTS

April-June 2003

Editorial.....	171
Managing Nuclear Opposition : Reflections Upon Cold War Experience	
Sir Michael Quinlan.....	173
Brinkmanship of North Korea and its Stand Off with the USA	
Major General Ashok Joshi, VSM (Retd).....	185
Reflections on India's Nuclear Doctrine and Command and Control	
Rear Admiral Raja Menon (Retd).....	196
Taiwan : Strategic Assessment 2003	
Lieutenant General Vijay Oberoi, PVSM, AVSM,VSM (Retd).....	215
Managing Technology – A Challenge for the Future	
Captain Rakesh Vadhyar.....	233
Indian Air Force and Technology	
Air Vice Marshal SC Rastogi, AVSM, VSM (Retd).....	246
Disquiet on the Western Front	
Shri EN Rammohan, IPS (Retd).....	253
Ethno Nationalism in North Eastern India	
Brigadier R S Grewal, VSM (Retd).....	262
Prosecuting Terrorists : A Case for Use of Military Justice Apparatus	
Major General Nilendra Kumar.....	277
Kargil War Widows	
Dr Leena Parmar.....	289
A Facet of Naval Philately and Naval Submarines	
Commodore A K Dhir (Retd).....	299
Letter to Editor.....	315
Review Articles	316
Short Reviews of Recent Books.....	323
Additions to the USI Library.....	339

NOTE

The views expressed in the Journal are not official and the opinions of contributors and the Editor in their published articles are not necessarily those of the Council of the Institution.

USI Correspondence Courses

1. The USI conducts correspondence courses for DSSC – Army, Navy, Air Force, TSC (Army) Entrance Examinations and Promotion Examinations Parts B & D.
2. Membership of the USI is mandatory to join any correspondence course. Membership fees for defence personnel/entitled civilians are shown below: -

	Defence Personnel	Entitled Civilians
(a) Life Membership	(Rs)	(Rs)
(i) Entrance	1000/-	1000/-
(ii) One Time Fee	4000/-	6000/-
Total	5000/-	7000/-
(b) Ordinary Membership (01 Apr - 31 Mar)		
(i) Entrance	300/-	300/-
(ii) Annual Fee	300/-	450/-
Total	600/-	750/-

3. Schedule of Correspondence Courses 2003-2004

Courses	Tuition Fees			
	Commencement of course	Date of exam	All Subjects (Rs.)	Each Subject (Rs.)
(a) DSSC Entrance Examination (Army)	Nov 2003	Sep 2004	1700	300
(b) DSSC Entrance Examination (Navy)	Dec 2003	Jun 2004	—	375
(c) DSSC Entrance Examination (Air)	Jan 2004	Jul 2004	650	350
(d) TSC Entrance Examination	Nov 2003	Sep 2004	850	300
(e) Promotion Examination Part D	Apr 2004	Oct 2004	1120	250
(f) Promotion Examination Part B	Dec 2003	Jul 2004	800	200

4. Correspondence Courses for Special to Corps subjects are not conducted.
5. **Mode of Payment.** Local cheque or bank draft in favour of the *Director USI of India* payable at New Delhi, postal orders in favour of *Director USI of India* payable at Vasant Vihar PO New Delhi or Cash.
6. Prospectus is available at the USI.
7. Contact addresses/timings.

(a) Email	:	ciusi@vsnl.net
(b) Website	:	www.usiofindia.org
(c) Visiting hours	:	1000 hr to 1230 hr } Monday to Friday 1400 hr to 1630 hr }

EDITORIAL

Sir Michael Quinlan, former Permanent Under Secretary of State, Ministry of Defence, UK, gave a talk at the USI on 21 March 2003 on the subject of "Managing Nuclear Opposition : Reflections Upon Cold War Experience". The lead article in this issue of the Journal has been excerpted from his talk. According to the author, the Cold War rivals were suspicious and mistrustful of one another right till the end, yet they realised the need to avoid a nuclear war and even lesser wars due to the danger of their getting out of hand and escalating into a nuclear war. The rival nations understood the futility of continuing arms race based on worst case scenarios and undertook arms control and disarmament negotiations. Bilateral Strategic Arms Limitation Talks were held between the USA and the former USSR spread over a long period. These resulted in a number of treaties restricting the number of nuclear weapons and anti ballistic missiles on both sides. The second major contributory factor towards confidence building was instituting the system of information sharing. Provision of hotlines and agreement to give advance warning of certain types of missile launch and sharing information about major exercises helped in reducing tensions. Various methods adopted for managing the relationship between the two nuclear superpowers added an extra margin of assurance and risk-reduction. It may be possible to derive some useful lessons from the USA-USSR experience in context of the fact that India has land borders with two nuclear powers.

Possession of weapons of mass destruction by nations is playing an increasingly important role in shaping international relations. Maj Gen Ashok Joshi, VSM (Retd) in his article titled "Brinkmanship of North Korea and its Stand Off with the USA" has focused on the announcement made by North Korea in October 2002 that it has an active nuclear programme for weapons of mass destruction. The author has traced the history of the past agreements and efforts made to keep the Korean Peninsula free of nuclear weapons. Commenting on the nuclear bomb making ability of North Korea, the author has stated that "Pakistan is believed to have bartered away nuclear technology to North Korea as a means of payment for procuring Taepodong ballistic missiles". North Korea already has missile systems with a proven capability of striking

targets in Japan, South Korea, China, Russia and the US bases in the Far East. In the past Democratic People's Republic of Korea (DPRK) has sold missile systems and missile technologies to Egypt, Iran, Pakistan and Syria. The US is hoping that diplomatic activity would reaffirm the US ties with key players and avert a nuclear arms race in the region. The US may promise economic rewards, if North Korea agrees to desist from becoming a nuclear power.

Nuclear doctrine of a country must be designed to meet its perceived security threats and fulfill the national security objectives. India needs a suitable, visible and survivable command and control structure to support her nuclear capability. India perceives a military threat from China and Pakistan, both of which are nuclear power states. Rear Adm Raja Menon (Retd) delivered the first Major General Samir Sinha Memorial Lecture at the USI on 25 April 2003 on the subject of "Reflections on India's Nuclear Doctrine and Command and Control". The script of the talk has been published as an article in this issue of the Journal. The author traces the history of evolution of the nuclear capability in India leading to Pokhran I nuclear test in May 1974. He has praised the role played by our scientists in attaining indigenous nuclear and missile capabilities. In May 1998, India conducted five nuclear tests at Pokhran with different yields. According to the author the arrival of the nuclear bomb has helped in commencement of building institutions to take corporate strategic decisions with simultaneous inputs from different arms of the Government. The National Security Council has been set up and its staff alongwith the National Security Adviser provides continuity of analysis on devising political options. A draft Indian Nuclear Doctrine has been published in mid-1999 although the Government has yet to formally approve that document. No First Use (NFU) of nuclear weapons, and punitive retaliation to any form of nuclear attack on India, are important clauses of the draft doctrine. Integrated Defence Staff has been authorised and the Chief of Defence Staff is likely to be sanctioned. The Integrated Defence Staff has been entrusted with the task of working out routine aspects of nuclear issues as well as formulation of policy. With time, effective command and control system of nuclear forces is bound to emerge.

Managing Nuclear Opposition : Reflections Upon Cold War Experience

Sir Michael Quinlan

Common Interests and Objectives

In the early years of the Cold War many people would not have thought it immediately obvious that there could be basis or scope for cooperative management of any aspect of the military relationship between NATO and the Warsaw Pact. The two alliances were plainly adversaries, and interactions between them were often seen as a zero-sum game - anything that was good for the Eastern side must surely be bad for the Western, and vice versa. But as we both settled down to the long-term reality of the confrontation, each recognising that the other side and its nuclear armoury were not going to go away and that we had to learn to live on the same planet and indeed largely in the same continent, we came to realise that however apprehensive and suspicious and mistrustful we were of one another - and there always was, right to the end, suspicion and mistrust - there were nevertheless some basic interests that were shared and compatible. There were three obvious ones -

(a) We should not get into a nuclear war, since that could easily mean ruin for us both.

(b) We should not get even into lesser wars, both because these could be costly and painful in themselves and, still more, because as history repeatedly showed wars can always get out of hand and become much wider and rougher than anyone expected or intended at the beginning - in other words, we could find ourselves escalating into nuclear war.

(c) Even in peacetime military confrontation is expensive in both direct and indirect costs, and both sides had many

Sir Michael Quinlan is a former Permanent Under Secretary of State, Ministry of Defence, UK.

Text of the talk delivered at the USI on 21 March 2003.

Journal of the United Service Institution of India, Vol. CXXXIII, No. 552, April-June 2003.

other demands on their resources, the less we each had to spend on this the better, provided that that did not mean lowering our guard.

These three common interests were never formally articulated, still less negotiated, in the tidy form in which I have outlined them; but I believe they came to be tolerably well accepted by both sides as sensible objectives, even though they often had to be integrated into policy alongside other objectives on which interests might be far from compatible.

Methodology Adopted for Pursuing Objectives

There were numerous ways in which these three shared objectives could be and were pursued at one time or another. I suggest that these ways too might be sorted broadly into three categories.

The first category was arms control and disarmament bargains - that is, deals to reduce or at least limit various aspects - numbers or types or locations - of nuclear capability on each side. The main point of this was that if one could reach dependable agreement, this could avoid pointless arms races in which each side took an ill-informed and worst-case view of what the other was doing or might do by way of acquiring capability, and they both merely finished up having expended a great deal of resources - not just money, but other assets too like skilled manpower - to achieve much the same relative position as before.

The second category was information sharing - transparency, by another name. The point of this was partly the one I have just touched upon - to avoid arms races and the instabilities they can cause, by avoiding exaggerated fears of the other side's capability. But information about capability was not the only sort of information that could be helpful to stability, to preventing conflict and waste. One other sort was information about behaviour - explaining to the other side what one was doing, like moving troops or aircraft or ships around, so that the other side did not get needlessly alarmed and think that an attack of some kind was being prepared. And yet another sort was information about strategy and doctrine, to help the other side understand accurately what we would or would not be likely to do in various kinds of stressful situations.

My third category of ways of pursuing those common interests is constraining behaviour - in particular, preventing or limiting actions that might be seen as provocative.

These three categories of method did not necessarily have to be pursued by formal agreement - at least some of their benefits could be secured, in the right circumstances, simply by informal understanding or by accepted custom, and sometimes even by unilateral action. But for both practical and political reasons explicit agreement was often the preferred path.

Arms Control

In the arms control field the major effort was the sequence of bilateral negotiations between the United States and the Soviet Union which began in 1969 with SALT - Strategic Arms Limitation Talks - and then continued through various episodes like a second phase of SALT and then the successive stages of START - Strategic Arms Reduction Talks - which came afterwards. I could suggest what was achieved by the process in relation to those three shared objectives.

First, these negotiations played a part in keeping down the scale of resources the two sides spent on nuclear and related forces, if not below the original levels then at least lower than they would probably otherwise have become. The first SALT agreement, reached in 1972, set ceilings on the numbers of the main classes of strategic offensive delivery systems on each side, and - importantly - concluded an accompanying treaty limiting anti-ballistic-missile systems to modest numbers and tightly-constrained characteristics and deployments. The particular value of that treaty was that it avoided not only an expensive competition in Anti Ballistic Missile (ABM) systems themselves, but also a possible race, perhaps at least equally expensive, in which each side would have sought to ensure that it had enough offensive capability, even in adverse scenarios, to be able to defeat the other side's ABM system, whether by saturation or otherwise. That could be a costly business, as we in Britain found in ensuring that our relatively small capability remained evidently capable of penetrating the ABM defence that was still allowed on the Soviet side.

Second, the bargains in SALT and START - the levels and main types of force constraint that were agreed - had the effect that each side could be certain that the other did not have, and could not hope to acquire, the capability for what is customarily called first strike as distinct from first use - that is, pre-emptive attack to destroy or at least gravely weaken the other side's ability to retaliate. This was good not only for peace-time cost-saving but also for crisis stability, since it meant that neither side had to embark upon wholesale hair-trigger readiness, or highly decentralised devolution of command, or strategies of launch on warning. These effects are surely significant and valuable in any situation of nuclear opposition; and though arms control is not necessarily the only way of achieving them, in the Cold War setting the arms control process made a big contribution to giving the two sides full assurance about them. SALT and START were in that sense highly effective Confidence Building Measures (CBMs) in themselves.

There was a third effect of these arms control dealings that was more incidental and less clearcut but of real value. This was the very fact of talking together about nuclear issues in a serious, sustained and businesslike way, both in the negotiations themselves and in the subsequent monitoring arrangements that were set up - a Standing Consultative Commission existed in order to sort out together any problems that either party felt had arisen in the interpretation, implementation and maintenance of the deals. There was no bargaining about doctrines or declarations, and there is little doubt that the two sides continued to have in some respects considerably different strategic concepts, reflecting their different mindsets and circumstances; but at least the process as a whole meant that each side progressively came to a better understanding than before of how the other side thought and what did or did not worry it.

Let me note two qualifications about it. The first is that although negotiations of this kind served valuable objectives which were common and compatible for both sides, they could not exist in perfectly sealed compartments insulated from other events going on between the two. The opening of the first SALT negotiations was, at a late stage, set back for several months because of the

Soviet military action in Czechoslovakia in 1968, since the United States felt that it could not be seen to talk amicably with the Soviet Union immediately afterwards. And then at the end of 1979 a second phase of SALT – SALT II – had to be held back from ratification in the US Senate, even though its terms had been concluded between the two governments, because of the Soviet invasion of Afghanistan. Nevertheless, in both these instances the shared interests re-asserted themselves after a time, and business was resumed.

A second qualification about SALT and START was internal to the process itself. That was the problem of verification. The United States was a notably open society, and the Soviet Union could be tolerably sure - not perfectly sure, but mostly sure enough - of finding out in one way or another whether or not the US was abiding by its agreements. But the Soviet Union was a closed society with a secretive tradition, and it was not nearly as easy for the US to be confident about what was going on inside it. The United States, therefore, took the line - rightly, in my opinion, especially as we found out later that the Soviet Union unquestionably cheated on other arms-control agreements which lacked verification - that they would not agree to any nuclear-arms bargain which they could not check up on. That meant that the bargains had to be struck in terms of things which the US could be confident of seeing and counting; and that in turn meant that the prime currency of the agreements had to be delivery vehicles or emplacements – aircraft, submarines, fixed missile silos and the like – which the US satellites in space could observe, and not in terms of warheads or bombs which they could not, even though the latter might ideally have been a better currency for arms-control deals.

Information Sharing

I turn now to my second category of methods, the provision of information more or less for its own sake. This was not such big business as the arms-control effort, and not so high-profile politically, but a number of things were done. One was the provision of hot-lines - initially between Moscow and Washington, but there was later a similar arrangement between Moscow and London; I am not sure whether there was one between Moscow and the capital of

the other Western nuclear power, in Paris. These were dedicated direct lines, not dial-up ones, and they were exercised regularly. I do not recall to what extent they were used for communication in serious crises - there were very few, if any, of these in the later Cold War years - but the very fact that the lines were there if needed will have had some confidence value. And there was never any attempt on either side to exploit these lines in order to manipulate or deceive the other - that too seems important.

Another instance of information-provision was agreement in 1971, alongside the first SALT negotiation, to give advance warning of certain sorts of missile launch - defined as those going outside the owner's territory in the direction of the other party - which might have risked causing alarm or unease if they had come as an unexplained surprise. The 1971 agreement had other features like a commitment to inform the other side promptly and fully about any accidental nuclear explosion, but that never had to be used.

A further type of information-provision worth mentioning was information about military manoeuvres. Though this was not directly about nuclear forces, it is relevant to my theme because it bore upon the objective of reducing any risks of an unintended outbreak of conflict that might lead to nuclear escalation. One of the provisions emerging from the 1975 Helsinki Conference on Security and Cooperation in Europe was that all North Atlantic Treaty Organisation (NATO) or Warsaw Pact manoeuvres involving over 25,000 troops moving out of their normal locations in certain defined areas of Europe should be notified to the other side at least 21 days in advance. There was accompanying provision for inviting the other side to send observers, but this was optional, and it was not taken up consistently or symmetrically by the two sides.

Analysis

I have no very definite evaluation to offer of this particular CBM. By the time it came into force the Cold War stand-off was already in highly mature form, with crises like those over Berlin and Cuba well in the past. The dividing lines were very well defined, with no major ambiguities or live disputes outstanding, and the arrangement never had to undergo the test of grave East/West

crisis, at least within the NATO area. That said, I would judge that the measure was a healthy one and that it did make some modest contribution to confidence and reassurance. Neither side ever tried to exploit the possibility of using the announcement of a major manoeuvre - or even of announcing one that did not in the end take place - in order to exert political pressure, or to mask a troop movement of real operational intent; and so far as I know neither side ever tried to play games about the size of manoeuvres, for example by artificially splitting up a major exercise into smaller packages which would individually fall below the notification level. It is, however, fair to acknowledge, at least as a theoretical possibility, that there might have been risks of manipulation in ways like these if general political confidence had been at a low ebb, and such risks are especially present if the terms of the notification agreement, or accompanying provisions about observers or the like, are not very precisely drawn and depend on a degree of goodwill in implementation. There was one period when the NATO side suspected the Soviet Union of not observing the agreement as carefully as it ought: that was in 1981, when there were substantial Soviet troop movements to exert pressure on Poland, or at least to take up precautionary positions, at the time of the anti-Communist political unrest there.

Another information-providing idea is worth noticing, although it never actually came to anything, because it illustrates a significant point about the wider relationship. Relatively early in the Cold War the United States proposed what was called an "Open Skies" arrangement, whereby aircraft of each side would be allowed to overfly the territory of the other unopposed, on proper notification and under agreed rules and frequency. It was intended as a genuine CBM and not just as disguised espionage; but the reason why it was never accepted was that though its form was to be the same for both sides the net effect would be distinctly asymmetrical. As I noted earlier, the Soviet Union was a tightly closed society, and it undoubtedly regarded its resulting ability to protect its secrets more fully than the US could as a significant strategic advantage. It did later, in the SALT bargain, acquiesce in the fact that US satellites could observe Soviet territory, and indeed the agreement contained a provision that this observation should not be obstructed;

but that provision was accepted in SALT only as a matter of reluctant realism. The Soviet Union recognised that without it there could be no agreement, and that the various benefits which the Soviet Union stood to gain from the deal would then be lost.

One of the most important fields of communication was about doctrine and strategy, even though there were never talks between governments with these topics made directly the subject-matter. I have already mentioned that some communication about this happened as an incidental by-product of the SALT and START processes. In addition, as time went on there was increasing participation by Soviet individuals with close links to their Government in the huge volume of non-governmental debate and analysis there was in the West over nuclear issues. A further Western contribution of a more official kind flowed from the work of NATO's Nuclear Planning Group - the NPG. This was a grouping, set up in the late 1960s and operating at various levels, Ministerial or official, to discuss collectively what NATO's planning concepts ought to be for nuclear weapons. NPG work was formally secret, but NATO made no secret of its basic strategic doctrine of flexible response and the part which nuclear weapons played within it. NATO Ministerial communiqués often had something to say about this, and the very fact that a substantial number of nations were involved and had to explain things to their elites and their general publics meant that broad understanding about the work of the NPG and the issues it tackled was fairly widespread. I have no doubt that in one way or another the Soviet Union came to know a lot about it.

This was helpful in at least two complementary ways. First, it meant that the Soviet Union knew that NATO had faced up to tough questions about nuclear use, had thought hard about them, and had reached agreement amongst the members, at least in terms of concepts, about what the answers might have to be. That was good for deterrence. But second, the Soviet Union also learned things that were good in some degree for its peace of mind, and, therefore, for stability - for example, that we did not seek a capability for nuclear pre-emption, or for all-out spasm response as our sole option even if the Soviet Union went nuclear first, or for launch on

warning (even though we did, as they will have known, maintain a small number of delivery systems at high readiness).

One other factor about NATO's particular circumstances was helpful. Because it was an alliance of sovereign partners, with different histories and perceptions and diverse attitudes to war, and because public opinion about nuclear weapons was highly sensitive in many countries - several of us well remembered what major war in Europe and heavy homeland bombardment were like - NATO leaders were generally careful to avoid over-aggressive or eager-sounding rhetoric about nuclear issues. I think that this was modestly helpful to the relationship.

I would argue that these things - a degree of openness about doctrine, and restraint in public utterances - were in our interest even though the other side did not always behave in the same way. The Soviet Union said much less about doctrine than NATO did, and at least in early days - especially during the leadership of Nikita Khrushchev - there were some bombastic statements about Soviet nuclear capabilities and attitudes. We did not feel able to take on trust everything that was said, for example about no-first-use. But it was nevertheless advantageous to us that the Soviet Union, whether or not it reciprocated, should understand us clearly.

Communication During Crisis or War

I have been talking about communication in peacetime. But it is worth touching upon one particular subject which the NPG discussed - communication during crisis or war. That is a big subject in itself; in particular, many books have been written about the interchange, both in words and in actions, in the classic case of the 1962 crisis over Soviet missiles in Cuba. We may recall also communication by actions in 1973, when the United States deliberately made it known that it was bringing its forces to increased readiness as a warning to the Soviet Union in the Middle East war (at the same time, I should add, as it was more quietly warning Israel not to push victory over Egypt too far). Around then, by coincidence, the NPG was studying what it called CNI - Communication of Nuclear Intentions. The aim of this was to get our thinking clear in advance about what might need to be

communicated - perhaps to our own publics, but primarily to the other side - if conflict got to the point where we were compelled to envisage nuclear use. It was recognised that if, in accordance with the flexible response strategy, we intended to use nuclear weapons on a controlled scale to terminate the war, not to win it, we would need to make as sure as possible that the other side did not misinterpret the action as either just a military move or else the first salvo in an all-out strike. The concept would be, to underline to the other side several facts: our determination not to surrender whatever they were trying to seize; the risks of escalation for everyone; the limited scope and the political purpose of our action; and our central interest in stopping the fighting, not winning it in an old-fashioned sense. All this was never put to the test, and we did not develop a great deal of detail about it - it was more a checklist of aspects to keep in mind, such as the need for careful coordination of what was to be said. But the exercise was not valueless.

Other Measures

I have spent a considerable time on my second category of relationship-building methods, the ones concerned with giving information of one kind or another, and even then I have not touched upon some possible items like providing clear and honest information about military budgets and programmes. But I ought to say something about my third category, the avoidance of actual behaviour that might be thought provocative. I can be briefer about this. Some understandings were built up gradually and without explicit dialogue, as it were by custom and practice. For example, in the early years of the Cold War there were episodes of friction about aircraft approaching or penetrating the other side's airspace to get information, and on a few occasions aircraft got shot down (most notoriously, of course, the US U2 in 1960); but as time went on both sides came to a clearer and broadly compatible understanding about how this game should and should not be played. The main example of explicit agreement came in 1972, when the United States and the Soviet Union negotiated a deal about avoiding incidents between naval vessels at sea - something like a set of rules of the road, prohibiting such things as dangerous crossing of the bows especially during carrier operations, or very close

approach, or simulated attack by aircraft. The agreement never applied to submerged submarines - there would be severe technical and operational problems about that - but within its limits it worked usefully; there continued to be occasional incidents between Soviet and US ships, but they were of a manageable character.

Evaluation of CBMs Adopted During the Cold War

The first principle I suggest is simply that it was worth taking trouble over all this. Over the 40 years as a whole a great deal of high-level trouble was taken, by both politicians and officials, by both civilians and military, and I regard this as having been time well spent. Next, the relationship was managed at least as much through what people did as through what they said, especially since the degree of mistrust meant that the latter might not always be believed at face value. Third, we learned more and more as time went on to consider how matters would look to the other side, given that it was not just a mirror-image of ourselves but had different mindsets as well as different forces and geography, so that things about our side which seemed to us straightforward, obvious and entirely credible were not necessarily so to the other without extra effort on our part. Fourth, though in military matters secrecy remained always an important aspect of security, it did in the nuclear age need to be balanced against the benefits of significant transparency - benefits both of making deterrence clear and credible (which was not just a matter of brandishing the biggest stick available) and of helping to ensure that war did not start through one side or other misinterpreting events, intentions or capabilities. Fifth - perhaps logically just an aspect of the fourth, but in my view so important that it deserves to be identified separately - the value of making unmistakably clear to the other side that point about "first strike": that we were nowhere near having, and had neither plans nor desire to acquire, the ability to take out their nuclear forces by surprise or early attack, and that they did not need, therefore, any more than we did, to make plans for taking nuclear decisions in haste or on precarious information like blips on radar screens. And sixth, that worthwhile efforts in these matters did not have to depend upon pious assumptions about friendship and goodwill, or to be formally negotiated (though that could be helpful) or to be neatly symmetrical and reciprocal.

Overall, I judge that these various methods of managing the relationship between the two nuclear superpowers and their alliances did make an important and positive contribution. I do not suggest that they played a crucial part in the remarkable fact that the Cold War never became, even at low level, a hot one - the key factors in that were that the mere presence of nuclear armouries made everyone very careful, and that once we were past the troubles over Berlin and Cuba - that is, about a third of the way into the period - the two sides had come to a shared recognition that they must live with the status quo and that though they might dislike aspects of it, they must forget about any ideas of changing it by force or military pressure. But I do believe that the relationship effort added an extra margin of assurance and risk-reduction, and indeed of deterrent credibility at the same time; and that must always be a good thing when there are nuclear weapons around. I believe also that the effort mostly helped the general political relationship - I say "mostly" because just occasionally problems in negotiations themselves raised the political temperature. And I believe it did a good deal to keep the resource costs of the confrontation lower than they would otherwise have been. In brief, I believe that the effort did usefully serve those shared objectives with which I started.

RESEARCH PROJECTS

Members interested in undertaking research projects under the aegis of the Centre for Research, may submit research proposals. In case of serving personnel, the proposals should be routed through the concerned Service Headquarters; retired personnel may route their proposals through one of the Service Headquarters, or send these directly to the Director, for consideration by 31 December each year. At present, five chairs have been instituted for one year projects, namely Field Marshal KM Cariappa Chair, Admiral RD Katari Chair, Air Marshal Subroto Mukherjee Chair, Prof DS Kothari DRDO Chair and Ministry of External Affairs Chair. Final approval of projects will be the prerogative of the Board of Management. Copies of the Rules for Award of Fellowship Grants and Conduct of Research may be obtained from the USI.

Brinkmanship of North Korea and its Stand Off with the USA

Major General Ashok Joshi, VSM (Retd)

Introduction

Whether it is a twist of fate or not, the announcement made by North Korea in October 2002 that it has an active nuclear programme for weapons of mass destruction (WMD) somewhat queered the pitch for the USA, which had been painting Saddam Hussain as the arch-villain with WMD secretly disposed in Iraq. The news was enough for the US Defence Secretary Donald Rumsfeld to fulminate that the USA can wage war in two disparate areas and conditions! While it is curious why the Democratic People's Republic of Korea (DPRK) regime chose to make the abrupt announcement when it did, it is nevertheless a strong indicator of the approach to policy making of the DPRK regime under Kim Chong-il.

Subsequently a series of swift decisions including expulsion of the inspectors from International Atomic Energy Agency (IAEA), announcing that the freeze on activities at its nuclear facilities had ended and reactivating their nuclear reactor at Yongbyon - possibly on 26 February 2003 - were taken by DPRK. The icing on the cake has been provided by their provocative action of firing a missile on 25 February 2003 into the Sea of Japan when the newly elected South Korean President Roh Moo-Hyun was sworn in and again on 10 March 2003. While some feel that North Korea has over reacted to President Bush's grand declaration of inclusion of that nation in the 'Axis of Evil' it is likely that this forms part of a carefully calculated game plan. North Korea has displayed boldness in a shrewd manner knowing that presently and in the immediate future the Bush administration is engaged with Iraq.

The Korean Peninsula

Korea has served as a bridge between the powers of Asia

Major General Ashok Joshi, VSM is from the Corps of Engineers.

Journal of the United Service Institution of India, Vol. CXXXIII, No. 552, April-June 2003.

and Pacific. The narrow peninsula ribbed with unending high mountain ranges is no easy highway to conduct military operations especially in the northern region. Unlike the Sea of Japan, the Yellow Sea is very shallow and has tidal flats, and harbours have been developed with some difficulty. For most of its history, Korea had a special relationship with China. Under the Confucian scheme of international relations, Korea was the 'younger brother' to China and as such absorbed perforce much of the culture, religious, political and social ideas from the 'teacher'. Korea was conquered in 1910 by the Japanese and remained a Japanese possession for the next 35 years. Following the defeat of Japan in 1945, the 'international frontier' between the Communist dominated world and the West was drawn at the 38th parallel that soon hardened into an international border between North Korea or DPRK and South Korea or the Republic of Korea (ROK). Only one-fifth of Korea can be cultivated, the rest has steep mountains and valleys. The cliché 'agricultural South and industrial North' though simplistic is reasonably accurate in describing the two nations.

Nuclear Weapons Programme and Ballistic Missiles

North Korea maintains uranium mines with four million tons of exploitable high quality uranium. In the mid-1960s, it established a large scale atomic energy research complex in Yongbyon under the cooperation agreement with the erstwhile USSR. In 1965 a Soviet IRT-2M research reactor was assembled for this centre. From 1965 to 1973, fuel enriched to 10 per cent was supplied to DPRK for this reactor. In 1974, Korean specialists independently modernised Soviet IRT-2M research reactor bringing its capacity to eight Mega Watts (MW). In the same period DPRK began to build a five MW research reactor. In 1977, the DPRK concluded an agreement with the IAEA that allowed the latter to inspect a research reactor built with the help of the USSR. In 1980s North Korea began focusing on the practical uses of nuclear energy and the development of a nuclear weapons system. It began to operate facilities for uranium fabrication and conversion. Construction of a 200 MW nuclear reactor and nuclear reprocessing facilities commenced at Taechon and Yongbyon respectively. The existence of the installation at Yongbyon is known to the US since 1985 and has also been reported by the IAEA. In 1985, North Korea acceded

to the Treaty on the Non-Proliferation of Nuclear Weapons (NPT) but refused to sign a safeguard agreement with the IAEA. However, this was done on 30 January 1992. In 1990, satellite photos showed the presence in Yongbyon of a structure, which could possibly be used to separate plutonium from nuclear fuel.

In July 1988, South Korean President, Roh Tae Woo initiated efforts to improve North-South relations by exchanges, family reunification, trade and contact in international forums. This finally culminated in two major agreements: the Agreement on Reconciliation, Non-aggression, Exchanges and Cooperation and the Declaration on the De-nuclearisation of the Korean Peninsula (the "Joint Declaration"), which came into force on 19 February 1992. It states that the two sides "shall not test, manufacture, produce, receive, possess, store, deploy or use nuclear weapons" and that they "shall not possess nuclear reprocessing and uranium enrichment facilities". In March 1992, North-South Joint Nuclear Control Commission (JNCC) was established, mandated with verification of the denuclearisation of the peninsula.

JNCC, however, failed to take off as no agreement could be arrived at as regards the methodology of bilateral inspections. Possibly from mid 1992 North Korea began having second thoughts on the nuclear issue. It refused to cooperate with South Korea on the joint declaration and disallowed inspectors of the IAEA to conduct a special inspection of two unreported facilities holding nuclear waste. On 12 March 1993, North Korea announced its withdrawal from the NPT. The UN passed a resolution in May 1993 urging DPRK to cooperate with the IAEA and to implement the 1991 North-South Korea denuclearisation accord. The US held three rounds of talks with DPRK commencing June 1993. Using track-II channels in 1994, ex-President Carter also wooed North Korea. The progress made was stymied by the death of North Korea's founder leader Kim Il Song in 1994.

The talks were resumed in August 1994 and concluded with the Agreed Framework. Under this agreement, North Korea was to freeze and eventually dismantle its existing suspect nuclear programme, including the 50 MW and 200 MW graphite-moderated reactors under construction, as well as its existing five MW reactor

and nuclear fuel reprocessing facility. In return, North Korea was to be provided with alternative energy, initially in form of oil by the USA and subsequently with two 1000 MW proliferation resistant light-water reactors (LWR). The design of these two reactors would be such that they would produce much less plutonium. However, they would help meet the power shortage in North Korea. The agreement also included gradual improvement of relations between the US and DPRK. In January 1995, the USA responded to North Korea's decision to freeze its nuclear programme and cooperate with the US and the IAEA efforts by easing economic sanctions against North Korea in four areas as under :-

(a) DPRK was authorised use of the US banking system to clear transactions not originating or terminating in the US and unblocking frozen assets where there is no DPRK government interest.

(b) Permitting import of magnesite - a refractory material used in the US steel industry. This is mainly found in North Korea and China.

(c) The USA authorised transactions relating to credit cards, openings of journalists' offices and telecommunications connections.

(d) As provided by the Agreed Framework, disposition of spent nuclear fuel, participation of the US companies in LWR project, supply of alternative energy was authorised.

North Korea agreed to accept the decisions of the Korean Peninsula Energy Development Organisation (KEDO) and freeze its nuclear programme. The leading members of this organisation are South Korea, the USA and Japan. KEDO announced it had accepted the South Korean designed - Ulchin 3-4 LWR as the reference model for the project and a South Korean firm, Korea Electric Power Corporation (KEPCO) was to be the prime contractor. South Korea has promised to bear the major share of LWR project cost estimated at US \$ 4.5 billion. However, all this is now history as DPRK in violation of the Agreed Framework admitted in October 2002, to the existence of a clandestine programme to enrich uranium for nuclear weapons.

An intriguing question then is the bomb making ability of North Korea, which is basically dependent upon reprocessing capabilities. An examination by the IAEA of the radioactive isotope content in the nuclear waste revealed that North Korea had extracted about 24 kilograms (kgs) of plutonium. This is arrived on the basis of North Korea producing 0.9 gram of plutonium per megawatt every day from 1987 to 1991, which comes to 39 kgs. Since the yearly operation ratio was taken as 60 per cent the amount comes to 24 kgs. As a nominal bomb has eight kgs of critical mass, from this mass of material about three nuclear warheads could be extracted. However, the estimates of South Korean, Russian and Japanese intelligence vary greatly. Some analysts feel that North Korea removed the fuel rods from the five MW reactor and subsequently reprocessed the fuel during the slowdowns in 1990 and 1991. The Department of Energy (DOE) of the USA had indicated in January 1994 that four kgs of plutonium was sufficient to produce a bomb. On this basis North Korea could have anywhere from four to six nuclear devices. It is interesting that as far back as 22 April 1997, the US Defence Department had officially stated that "North Korea had produced enough plutonium for at least one nuclear weapon" and yet soft-pedalled the issue! It is also relevant that Pakistan is believed to have bartered away nuclear technology to North Korea as a means of payment for procuring Taepodong ballistic missiles.

North Korea does not have to worry about the means to deliver the nuclear devices at least in the immediate neighbourhood since it has developed a reliable ballistic missile programme. It has a proven capability of striking targets in Japan, South Korea, China, Russia and the US bases in the Far East. Initially, North Korea turned to development of missiles to augment its air power and to acquire a long-range strike capability. North Korea purchased its first Scud-B missile from Egypt - a Middle East country - where it later found a burgeoning market for its own weaponry system. DPRK using the process of reverse engineering developed subsequent versions of Scud-B missile and sold complete missile systems and missile technologies to Egypt, Iran, Pakistan and Syria. This has undermined the regional stability of the Middle East and South Asia. The 1980-1988 Iran-Iraq war amply demonstrated not only the danger but also the profit potential discovered by DPRK by this venture.

All missile development in North Korea has come about as a result of outside technical help and financial assistance. It obtained, for example, funds from Iran and Pakistan for developing Nodong and Taepodong missiles. Pakistan's Ghauri missile is believed to be a Nodong missile purchased from North Korea. DPRK have been diligent in their efforts to recruit Russian experts for their missile programme. DPRK has been able to reduce the development time significantly in the past with Iran's financial assistance and Russian technical know-how. The expertise of Russians could significantly reduce the time needed to develop the staging and re-entry technologies required for longer range missile systems to cross the Pacific and hit targets in the US hinterland. With regard to its commercial angle, DPRK is now delivering 'knock-down' kits and allied production and assembly equipment to Iran, Pakistan and Syria. North Korea may be transferring equipment, which could well allow countries like Iran and Pakistan to become indigenous producers of Intermediate Range Ballistic Missile (IRBM) and Medium Range Ballistic Missile (MRBM).

National Defence Commission and Strategy

The National Defence Commission is a defence committee, which is an independent organisation. It directly controls the military of North Korea and as such decision-making is faster. The General Staff under the Ministry of People's Armed Forces (MPAF), the highest executive organisation in military affairs commands and controls military operations. The DPRK Armed Forces maintain a single command system: the Chief of General Staff directly commands and controls ground corps, tanks, light infantry, artillery, naval and air commands. Kim Chong-il as the Supreme Commander of the People's Armed Forces and the Chairman of the Military Committee has overall command of a well oiled military machine.

Although North Korea's strategy in the current crisis can be baffling, it would be naive to deduce that lunatics are running North Korea. Past history is sufficient evidence that extremely intelligent people with a strongly developed sense of self-preservation are handling North Korea's affairs. North Korea's ambition for acquisition of WMD stems not from an indifference to deterrence or a gung-

ho attitude but rather a keenly evaluated understanding of the uses of deterrence.

North Korean Military Doctrine

DPRK military policy focuses on maintaining a military force capable of conducting an offensive operation into the ROK to attain the national goal of reunifying the Korean Peninsula. This is based on three fundamental concepts shaped by the late Kim Il-Song's vision of the future :-

- (a) Eventual reunification.
- (b) DPRK regime survival and leadership of a unified Korea.
- (c) Application of military force to achieve reunification.

North Korea's military doctrine has evolved through four stages since founding of Korea People's Army (KPA) in February 1948. Initially, the Soviet and the Chinese thinkers influenced Korean military thinking. Subsequently, in 1950, Kim Il-Song interjected North Korea's own combat experience into their military doctrine. Till 1962, DPRK thought in terms of conventional warfare based on Soviet military doctrine and tactics on basis of the Korean War. In December 1962, the military doctrine shifted dramatically towards people's war - to arm the entire population, to fortify the entire country as a 'cadre army' and to modernise weaponry, tactics and doctrine under the principle of self-reliance in national defence. Conventional warfare strategy was incorporated into and subordinated to the overall concept of people's war. In 1970s, renewed emphasis began to be placed upon conventional war and modernisation of KPA. The new military doctrine emphasised conventional warfare and impact of new weaponry on military strategy. The stress is on tactical mobility employing mechanised forces, firepower in the battlefield, deep penetration strikes and C3I (Command, Control, Communication and Intelligence). KPA is structured and deployed on the primacy of offensive operations. Main objectives of this concept are - the destruction of enemy forces, capture of enemy territory and destruction of enemy's will to fight.

The key concepts are combined arms offensive operations, battlefield mobility, flexibility and integration of conventional and unconventional warfare. Concentration of force, and firepower when combined with speed and security at a critical point will produce a decisive offensive strike. The operational problem facing North Korea is the aforementioned difficult terrain where multiple defensive positions have been prepared. These in turn have been strengthened considerably by the obstacle system of South Korea. To counter this, DPRK has laid considerable emphasis on increasing the size of its artillery force including self-propelled artillery, special forces and mobile troops.

DPRK would rely on a *blitzkrieg* type of offensive to destroy South Korean defences before South Korea could fully mobilise its national power or before significant reinforcements arrive from the US. North Korea has almost two-third of its combat units deployed or located close to the launching areas. Since the state of logistic stockpiling in forward zone near the Demilitarised Zone (DMZ) is believed to be very high (990,000 tons of ammunition-considered sufficient for four months of combat), it is possible that DPRK may be able to achieve surprise. Heavy artillery bombardment is likely to precede infantry assaults. Combined arms force will then make paths across the obstacle system for mechanised forces. These operations would be in conjunction with special forces groups used to interdict the depth areas. KPA would of necessity launch several feint attacks and diversionary thrusts to mask its main and subsidiary efforts. By employing *blitzkrieg* tactics North Korea would hope for disruption and destruction of the C³I elements of the South Korean military infrastructure thereby considerably diluting its counter attack capabilities.

Although war would primarily be fought on land, North Korea's recent tests of anti-ship missiles on the Sea of Japan indicate a more synergistic approach. It is likely that its Navy and Air Force would be in a defensive role to support the operations of the ground forces. At the same time, the Navy might attempt to land special forces trained in amphibious warfare on either coast or secure the Northern islands or support mainland operations against Kimpo's peninsula across River Han estuary near Seoul. North Korea would decidedly make extensive use of its missiles including Scud and

FROG to disrupt rear area concentrations, airfields, ports and C³I targets. DPRK is likely to complement the operations of its conventional forces with use of chemical weapons to demoralise defending forces, deny use of communication centres, storage areas and military bases without destroying the equipment or the facilities. It is more likely that these weapons would be used early rather than at a later stage.

The US Strategy

The USA has not articulated any coherent strategy for dealing with North Korea's brinkmanship. The ineptitude of the US policy makers is evident from the contradictory, conciliatory, and provocative statements made at various stages of the crisis. The inclusion of North Korea in the 'Axis of Evil' and the persistent move by the USA for a regime change in Iraq has made North Korea wary. The US while demanding accelerated IAEA inspections, soft pedalled the efforts to substitute conventional power for nuclear power. All along there have been deep divisions amongst the US policy makers. The USA has refused to have direct talks with North Korea unless the latter gives up its nuclear programme on the grounds that it would be seen as a sign of weakness. However, it has no answer to North Korea's refusal for multilateral talks. While pursuing a diplomatic solution the USA has made it clear that a military option does exist. In early March 2003, America moved 24, B-54 and B-1 bombers and 3,500 military personnel to the island of Guam. The USA is hoping that diplomatic activity would reaffirm the US ties with key players in the region, avert a nuclear arms race in the region, strengthen the US-China ties and promise economic rewards for all including North Korea. The US objective is to see that North Korea does not become a nuclear power. Military action as an option or economic sanctions would alarm South Korea and China. North Korea on the other hand has in recent times vastly improved its relations with China, Japan and South Korea. The USA would find it increasingly difficult to discover in these nations coalition partners if it contemplates military action against the DPRK. The US has a strong presence in the Pacific region. Based on the threat perception, the US has a number of contingency plans to provide military units to the ROK in the event of an armed aggression by the DPRK. There is a talk in the USA

of reducing its 37,000 troops force stationed in South Korea or removing them altogether from the peninsula. There is no denying that the USA would have far greater freedom of action against a 'rouge' state possessing nuclear weapons if its own soldiers were not within easy striking distance of the enemy's proven weaponry. This, however, is to be weighed against its commitment to safeguard South Korea's interests. Then again there is at present an increasing anti-US wave in South Korea demanding the removal of the US troops stationed there. China, Russia, South Korea and Japan have urged the USA for a peaceful solution of the problem whilst ensuring a non-nuclear peninsula. South Korea has offered to mediate between North Korea and the USA. The present situation, delicately poised, can drive a wedge between the USA and South Korea. Surely, the US strategists must know that one implication of North Korea going nuclear would be the pressure on the governments of Japan and South Korea to develop their own nuclear programmes.

Conclusion

As things stand North Korea has been successful in implementing a strategy of escalation of crisis. It has sent a clear signal that it is not ready or willing to be bulldozed like Iraq. It has been able to prevail upon its neighbours to generally acquiesce with its actions including testing of missiles after declaring an exclusive zone in the Sea of Japan. Possibly the next stage may be a test of Taepodong missile over Honshu as was last done on 31 August 1998.

The traditional US deterrence posture rested on its ability to launch a devastating counter strike against any country that used WMD against the US or its allies or their deployed forces. Such measures worked against the erstwhile Soviet Union whose leaders were rational and averse to taking suicidal risks. This may however not deter 'rouge' states like North Korea.

True to their chimerical nature, DPRK after railing against Iraq war agreed for multilateral talks with China and USA which were held in Beijing in April 2003. The talks were called off a day earlier than scheduled after North Korea made bellicose statements. DPRK

reiterated that Korean Peninsula faced war if US "aggression" went unchecked and if more US troops were sent to the region it would launch a preemptive strike. At the Beijing talks, DPRK has confirmed that it has reprocessed 8000 spent fuel rods into weapon grade fuel at Yongbyon.

After the Beijing talks, dialogues between the two Koreas have made little progress. After the Iraq War, the Bush administration is divided on the value of such talks. However, there seems little choice but to talk in order to penetrate the opaque regime to find what they think. In the short term North Korea may want economic aid and energy but in the long term they are more likely to pursue their nuclear ambition.

References

1. Suneet Chopra, 'North Korea's March Against Odds', *Frontline*, Vol 19, No.16, August 3-16, 2002.
2. Joel S Wit, 'A Strategy for Defusing the North Korean Crisis', *Arms Control Today*, January / February 2003.
3. David Rees, *Korea : The Limited War*, (London : Macmillan & Co, Ltd, 1964).
4. North Korea's ballistic missiles program, Centre for Non-Proliferation Studies, <http://cns.miis.edu>.
5. Suneet Chopra, 'North Korea-Coping with Threats', *Frontline*, Vol. 19, No.17, August 17-30, 2002.
6. North Korea's Nuclear weapons programme. FAS, <http://www.fas.org/nukel/guide/dprk/nuke/>.
7. 'Behind the Crisis', *Far Eastern Economic Review*, 23 January 2003.
8. Shannon McCune, *Korea's Heritage - A Regional & Social Geography*, Charles E Tuttle Co. Rutland, Vermont, USA.
9. North Korea's Military Doctrine, FAS.
10. Pakistan's nuclear technology for Korea, PTI, *The Hindustan Times* (New Delhi) 3 March 2003.

Reflections on India's Nuclear Doctrine and Command and Control

Rear Admiral Raja Menon (Retd)

Historical Evolution

The military in all countries have initially been repelled by nuclear weapons. India is no exception. Militaries have always been fully engaged in the business of planning wars, analysing wars and winning wars. And here comes a weapon that is so frightful that it is actually not usable. Its business is, apparently, to deter war. So, not surprisingly, the Chiefs of Staff of the Indian Armed Forces, when asked about their opinions on making a nuclear weapon in 1964, when the Chinese exploded their device in Lop Nor, gave their considered view against making the bomb. Their decision does not surprise me, as probably having been right at the time. The country was recovering its self esteem after the humiliation of the 1962 India-China War. The Army was rebuilding and the Henderson Brooks Report had just been written. Air defence was still guaranteed by the American Air Force. Pakistan had just transferred part of Pakistan occupied Kashmir (PoK) to China and the Navy's share of the defence budget had gone down to three per cent. The Chiefs were worried that nuclear weapons would only further weaken the Indian Armed Forces.

In the meanwhile we continued to have a nuclear doctrine – instituted between Nehru and Bhabha – and that was – to keep open the option of making an atom bomb. This doctrine, as we shall see, which was fairly sophisticated and advanced for 1964, rapidly became outdated and anachronistic in three decades. Nehru faced enormous opposition from both Rajagopalachari and Morarji Desai, the two other Congress politicians with weight who opposed weaponising; and, therefore, the idea of a nuclear guarantee was

Rear Admiral Raja Menon is a former Assistant Chief of Naval Staff (Ops). He is the author of *A Nuclear Strategy for India*.

Excerpted text of the first Major General Samir Sinha Memorial Lecture delivered at the United Service Institution of India on 25 April 2003.

Journal of the United Service Institution of India, Vol. CXXXIII, No. 552, April-June 2003.

pursued with much vigour. What India wanted was a joint guarantee from the US and the erstwhile USSR; and it is here that we see the first instance of senior politicians and bureaucrats dabbling in strategic matters of which they had little knowledge. We now know that the strategy of Extended Deterrence which existed between North Atlantic Treaty Organisation (NATO) in Europe and the United States had its hiccups even as late as the early 1980s when the Intermediate Range Nuclear Forces (INF) Treaty was being negotiated. How Indian leaders expected that the US and the Soviet Union would provide India with a nuclear umbrella, at the cost of their own territorial safety is quite mind boggling. But I suppose that the mid 1960s were a simpler era when the world had not become so complex. Needless to say no nuclear umbrella was forthcoming at least from the Americans without a formal treaty of alliance. There was a stony silence from Moscow.

Pokhran I. The next milestone in the development of India's nuclear doctrine is the 1974 Pokhran I test. Most accounts of the genesis for this test go back to mid 1971, before the Indo-Soviet friendship treaty, and the USS *Enterprise* incident. Working only through PN Haksar, PN Dhar, Dr Nag Chaudhuri who headed the Defence Research and Development Organisation (DRDO), Homi Sethna and Raja Ramanna, Mrs Gandhi opted for the test in 1974. No reasons were given by her, either publicly or on file. The Services, the Defence Minister Jagjivan Ram and the Defence Secretary KB Lall were informed only 48 hours prior to the test. This test had no security implications, was totally non-doctrinal from the nuclear strategy point of view, it was meant to enhance India's national prestige and strengthen Mrs Gandhi's internal position. The latter aims were achieved. It had no effect on China. On Pakistan, it had the effect of a jolt of electricity. Internationally, India attracted all the penalties of the non-proliferation regime. But, by not opening up the debate and building institutions, this test proved to be of no strategic consequence. The military were still uninvolved and India gained none of the advantages of a delayed second strike. Eventually the chief beneficiaries were the nuclear science community who gained all the benefits of scientific credibility, while facing none of the responsibilities of military deployment.

Post Pokhran I. During the next 20 years, some truly remarkable events occurred. To write a doctrine at the national level, a credible national level body is required. A kitchen cabinet style of four or five people can take executive decisions speedily. But to write an acceptable doctrine for the huge scientific, diplomatic, civil and military bureaucracies of India to follow and understand, the country requires a large and credible multi-disciplinary body, which was put together many years after Pokhran I. In the meanwhile the scientific bureaucracy continued to function as though it had received clear directives. Consider these facts. After Indira Gandhi's assassination, Rajiv who came to power had been known as a promoter of nuclear disarmament. Yet, the Dhruva 100 megawatt research reactor which lies at the heart of India's fissile material programme was started in 1973 and commissioned in 1985. Dhruva could, in 1985, make 25 kilograms (kgs) of plutonium a year, enough for six bombs. In the same year India imported 100 kgs of beryllium from West Germany. Beryllium is used to coat the plutonium core, thereby increasing the yield of the weapon. In late 1985 India succeeded in producing tritium, essential in boosted fission weapons. Shortly thereafter, perhaps in 1986, it managed to produce lithium-6 deuteride, a material essential for thermo nuclear weapons. There is no record of any political directive given to the scientists to specifically make all these materials, nor any directive not to make these materials.

Initial Efforts on Nuclear Doctrine. What if any parallel efforts were made to cobble together a nuclear doctrine? The earliest attempt we hear of anyone taking such an interest is by General Sundarji, who as the Commandant of the College of Combat in Mhow, commissioned six papers on the strategic consequences of Pakistan possessing nuclear weapons in the western sector. These studies apparently concluded that the superior Indian conventional forces, particularly armour, could be prevented from massing, by the threat of using tactical nuclear weapons. If Indian armour was dispersed, they could not be used to achieve a breakthrough. Hence India would need nuclear weapons to deter Pakistan from threatening Indian massing of armour. It is interesting to note that this scenario stopped being considered somewhere en-route, although it could have been quite credible as a first attempt.

Role of Scientists. In the meanwhile the rocket scientists were playing their part in keeping India's options open. However, after 1980 everyone was on board owing to Defence Minister Venkataraman's insistence that all departments should be consulted. It was, therefore, a corporate decision that the DRDO would be funded for an Integrated Missile Development Programme where all missiles would be developed simultaneously under Shri Abdul Kalam. The Services showed keen interest in the surface to air missiles (SAMs) and antitank weapons and very little in the Prithvi and Agni missiles. Eventually the Prithvi, a short range 150 kilometres missile was made with liquid fuel, which necessitated that it be pre-fuelled far away from its launch site close to the border and taken to a predetermined launch site, since in those days there was no Global Positioning System (GPS) and a missile must know its launch position accurately. Hence, in many ways the limitations of the Prithvi would have dictated the doctrine, if at all a doctrine had to be written at that time. Even now, there is little doubt that fielding the Prithvi with its extreme technical limitations will seriously affect nuclear stability. But the early move by the Defence scientists to start making strategic missiles showed great foresight in taking quick action before the world got serious about the Missile Technology Control Regime (MTCR). In moving a top scientist from the civilian Indian Space Research Organisation (ISRO) to DRDO, the separation between the civilian and military programmes was maintained, so that the international links that ISRO had with the world of science was left undisturbed.

Committee of Vice Chiefs. If at all another attempt was made to bring in other departments into doctrinal work, this happened in 1986. After an economic adviser told Rajiv Gandhi that a nuclear weapons programme would ruin the country, Rajiv Gandhi consulted the Chairman, Chiefs of Staff Committee. As a result, the Committee of Vice Chiefs produced two things – one, a recommended arsenal with its cost, and second, a doctrinal posture. The Vice Chiefs Committee estimated the costs of a nuclear arsenal at Rs. 7000 crores at 1985 prices, fixed the arsenal size at a low three figure mark, and situated this arsenal in a No First Use posture, as a minimum second strike deterrent.

It is estimated that these figures roughly coincided with the figures that the scientists had calculated, but that did not make any difference to the general determination to keep the Services out of the loop. It has even been suggested that the Vice Chiefs Committee was convened to keep the Armed Forces quiet for a few years without their agitating the political authority. Interestingly some analysis is required here to introspect about the purposeful way in which weapons technology was being made while every effort was simultaneously made to prevent the debate being opened up to admit the Armed Forces into the charmed doctrinal circle. Many commentators have written to say that the latter bit of bumbling occurred almost in an absent minded sort of way with the government not consulting the Chiefs. More material is now available to indicate that there was nothing accidental about this decision. This was a deliberate and calculated process of a deep distrust of Services' intentions if entrusted with the nuclear weapon. Perhaps the greatest pressure to prevent the Services from moving closer to the Prime Minister allegedly came from the scientific lobby, for what they thought were perfectly valid and ethical reasons. The scientists pointed out that the Services had never studied the subject, had never developed any doctrines and there still existed in the minds of the old Congress Party leaders, a deep antipathy to weaponising and openly admitting the military into the circle.

Story of Pakistan

This narrative has another side and that is the Pakistan story of which there are many versions. AQ Khan spoke of a rudimentary weapon capability as early as 1984, but a better date for the Pakistani delivery capability is 1987 or 1988. To rely on a pure technical base for making bombs with no accompanying doctrine came up with the first expected hurdle in 1990 and the alleged crisis. 1990 marks the first attempt at nuclear signalling. The signal was sent by Aslam Beg, who stated, rightly or wrongly, that India and Pakistan had deterred each other in 1990 and that without nuclear weapons the two countries would have gone to war. Now that is a far fetched theory. The two countries could hardly go to war without any political cause, and without any political objective. But nuclear doctrines are shaped by how the other side's perceptions are activated. What should deter him might not do so,

and what one feels is not a serious threat may be taken seriously by the other side. So nuclear doctrines have to be a living entity, constantly being modified as both sides continue signalling each other. Whether there indeed had been a crisis or not, VP Singh embarked upon the first attempt to elaborate command and control. VP Singh's concern was the consequences of a nuclear attack that would kill the Prime Minister. The recommendations of the six member 1990 Committee have not been published because the VP Singh Government fell before its work was completed. The line of succession conundrum is still unresolved. The Committee, incidentally had General Sundarji as a member but no serving Chief.

Four Pillars of Nuclear Doctrine

In the meanwhile Aslam Beg's claims to have established nuclear deterrence began to gather a following in India. The Narasimha Rao Government was back in power with all the Congress antipathy to weaponising. The Indian mirror image of Aslam Beg's doctrine was eventually to be termed 'Non-Weaponised Deterrence' by Perkovich and 'Recessed Deterrence' by the Indian government funded think tanks. The strange idea that without weaponising you could deter someone actually came to be believed in India and for almost seven years, from 1991 to 1998, this was the prevailing theory of deterrence. I can only compare this to the idea that ordnance factories alone can deter the enemy and that troops are not required on the ground. The Rao Government was delighted that the strategic community had found a high sounding term for doing nothing. The period 1991 to 1998 is a most interesting interruption to an earlier more turbulent period. Among the many questions that arise in one's mind is whether there existed any doctrine at any level? Most people say that since the scientists had made the weapon, actually owned physical custody of it, nuclear doctrine belonged to the scientists. There is some substance to this view. Arunachalam had been heard to comment that whatever India did, there were four pillars to any Indian nuclear doctrine :-

- (a) India would never initiate the use of nuclear weapons ('No First Use').

(b) The military must be kept firmly under civilian control in nuclear policy and plans.

(c) India must not enter an arms race.

(d) No single bureaucracy should be permitted to dominate nuclear policy making. Competing bureaucracies meant, the civil service, the diplomats, the scientific and the military bureaucracy.

In theory, these foundations are excellent and there is no doubt that these cardinal principles have been carried forward into the current nuclear doctrine. In actual practice, the four principles worked in a different way. The 'No First Use' actually meant a second strike – but no one was prepared to articulate how an indestructible second strike could be built, for that required extensive simulation and knowledge of command and control procedures, which only the military had – and the military did not seem to be interested in even studying the problem. The second and third pillars of nuclear policy – that the military should be under civilian control and that no single bureaucracy should dominate – was easier said than done. Maintaining parity between the four bureaucracies meant that there was some kind of balanced, learned and sagacious political authority or civilian overlordship, something like a McNamara or a Paul Nitze to do the refereeing. Perhaps the one individual who could have met these challenging specifications was Mr K Subrahmanyam. Mr Subrahmanyam can speak for himself but it appears to me that without any institutions, and without an official position, Mr Subrahmanyam's advice was taken when it was convenient and ignored when not convenient. Civilian control in Delhi apparently meant that the military would be completely ignored. And yet, there were good reasons, why a nation embarking on building a nuclear arsenal should be wary of the military. If any external factors influenced Indian thinking on how to manage an Indian nuclear doctrine, or in fact how not to manage it, the example of the United States was always available. Prior to 1960, in the pre-McNamara years, the US military had been independent of civilian policy makers and the result had been an unseemly competition between the three Services. There was no joint planning and many targets were attacked by dozens of aircraft, some from

the Navy and some from the Air Force. The Strategic Air Command had on more than one occasion tried to launch the United States into a nuclear war declaring that they could annihilate the enemy country. During the Cuban crisis when the Soviets had tactical nuclear weapons in Cuba, the Chiefs of Staff had advised Kennedy to invade Cuba after which Kennedy ceased to ask the Chiefs of Staff for any further advice. In 1965 when the NATO's nuclear planning group conducted an audit on the number of nuclear weapons deployed in Europe, it had been found possible to withdraw 7000 nuclear weapons as being irrelevant. Even after the reforms instituted by McNamara, it was the pressure of the US military that drove the arsenal size to the absurd figure of 35,000. This is how it happened. The military asked for a presidential directive on what the objectives were for the United States in a war with the Soviet Union. The military then translated this objective into an Integrated Nuclear Targeting List called SIOP. They then planned a certain number of hits on each target to ensure that it was destroyed. To be certain that the requisite number of missiles or bombs got through, an additional number were programmed. The result was 35,000. This is standard military procedure. It is clear that we can easily get into the same rut and end up with ridiculous numbers. So, inherently, to distrust the military is to take normal precautions; in fact for a poor country - to end up with a triad conveys strong hints of an emerging inter Services rivalry in India. But distrusting the military is one thing, leaving them out of the loop is quite another. When Arunachalam was asked what would happen if Pakistan attacked with nuclear weapons he made the famous statement - that of some operational commander in Central India opening a sealed envelope to find instructions for a retaliatory strike. If this is the treatment to the remedy of the military constantly overstating its case, then the treatment is obviously worse than the disease. You can see that the three problems of a possible arms race, keeping the military under civilian control and equal roles for all bureaucracies are seen to be closely interrelated issues in the minds of the leadership. The years 1995 and 1996 are important from the point of view of the nuclear narrative, but under the rubric of Recessed Deterrence, all doctrinal activity went to sleep in India, until woken up by the tests in 1998.

Yields of 1998 Tests

Upto May 1998 the country had no command and control structure, and no nuclear doctrine. What is interesting is the basis of the methodology used to arrive at the yields of the five nuclear tests that were conducted. These were, as is well known, 45, 15, 0.2, 0.3 and 0.5 kilotons. It is well known that the scientific community had been ready for the tests from about 1995 or 1996, since Vajpayee authorised the tests only on 10 April 1998, 30 days before the tests. So the interesting question that arises is, who decided that the tests should be 45, 15 and 0.2 to 0.5 kilotons; if the country had no command and control mechanism and further tests were unlikely to be permitted when the dust had settled down after these tests. These specific numbers would more or less fix India's future arsenal, decisively influence future nuclear doctrine, and, hence, the command and control to execute that doctrine. All this was in fact decided by a couple of scientists, without the benefit of any contribution from any of the other three bureaucracies, who were supposed to be equal.

Institutions and Organisations

What began to change the opaque way in which Indian policy was made was the bomb itself. Prior to the coming of the bomb, many attempts had failed to produce any of the institutions that other countries have, to take corporate strategic decisions with simultaneous inputs from all arms of the government. With Armed Forces situated outside the government, the Indian structure of government was hopelessly antediluvian. The rearranging of the government's decision making process and integrating the Services with each other and with the Ministry was something that had also been forced on the UK by the advent of the bomb, and a nuclear arsenal in the early 1960s. The same began to happen in Delhi. Attempts to set up the National Security Council (NSC) had been made since the mid 1980s, ever since the Armed Forces set up a joint Defence Planning Staff (DPS) during Arun Singh's first tenure. On many occasions, most ministries of the government had colluded to bring down and destroy the earlier NSCs. Sadly, the three Services had colluded to bring down the DPS. More importantly, since the National Security Council (NSC) is only a

minor recomposition of the old Cabinet Committee for Political Affairs (CCPA), it was not the NSC that had any importance but the National Security Staff who along with the National Security Adviser provided a continuity of analysis on devising political options. Seven months after the nuclear tests the NSC was set up once again, with a Strategic Planning Group (SPG) complementing it. Both the NSC and the SPG would have the benefit of a National Security Advisory Board (NSAB) of outside experts from the strategic, academic and economic communities. The dual role of the Principal Secretary to the Prime Minister also being the National Security Advisor has been criticised frequently, but has obvious merits in raising the status of the NSC and the National Security Staff into being given direct access to the highest levels of the constitutional authority. At least this may be one way of preventing the NSC from being destroyed by rival power centres. While all these improvements gave the country a more credible decision making process, commensurate with its new status as a nuclear power, none of it actually contributed to the command and control process of nuclear weapons. For that the country had to wait for the second coming of Arun Singh as the special adviser to the Raksha Mantri.

Importance of a Nuclear Doctrine

Why is the nuclear doctrine so important, or why does the nuclear doctrine have a key role in nuclear stability? To learn this, we have to go back to the cold war. During the cold war many lessons were learnt, some good and some bad. We have already seen how the early Indian political leaders were distressed with the way in which arsenal sizes had gone out of control. There were also many beneficial lessons – and the most important one was the need to achieve mutual deterrence, as early as possible. During the cold war, no concrete efforts were made in that direction until the arrival of McNamara and the publication of a Nuclear Posture Statement. What McNamara was attempting was – transparency. If nuclear weapons are meant to prevent war, then many of the details of what we intend to do with it should be known to the other side, so that they can make up their minds on whether they were deterred or not. The process of transferring that amount of information to the other side, is what we call transparency. The information that we transfer is our nuclear doctrine. So it is clear

that to avoid nuclear war, we need to establish mutual deterrence. The achievement of an overt level of mutual deterrence is what we refer to as nuclear stability.

What is truly incredible is that within the short span of nine months, from Pokhran II to Lahore, Vajpayee was able to get Pakistan to agree to an exchange of doctrines. A para in the Lahore Agreement reads thus, "The two sides shall engage in bilateral consultations on security concepts and nuclear doctrines with a view to developing measure for confidence building in the nuclear and conventional fields."

Draft Nuclear Doctrine

Certainly in the annals of prime ministerial attempts to achieve nuclear stability, the Lahore Agreement will ensure a permanent place of respect for Prime Minister Vajpayee. Conversely, President Musharraf must get the wooden spoon for firstly failing to understand what a statesmanlike agreement the Lahore memorandum was and secondly in denigrating it after Kargil. The Lahore memorandum died a slow death after Kargil. All of the follow up action demanded by the memorandum was simply not gone through. So, although Lahore was not formally buried, it was allowed to wither - except for the clause on nuclear doctrine. Again, in another rare act of tenacity and perseverance, the first NSAB under Mr K Subrahmanyam wrote the draft doctrine and publicly circulated it in August 1999 - after Kargil, when nobody else was pursuing any of the beneficial clauses of the Lahore memorandum. The draft came in for a lot of criticism; including one from me. But, in retrospect, I think the draft doctrine was an ambitious document, and something not attempted by any other nuclear weapon power with such speed and boldness. Although it was only a draft doctrine, and does not have the seal of official approach, it is well recognised that most of the clauses therein are part of public policy and a good thing too. The draft maintains the continuity of the concerns of the Indian political class before 1998, even though most of those concerns were articulated by the Congress Party, and the draft doctrine was issued during the time of the Bhartiya Janta Party (BJP). There is, therefore, a strategic continuum in our nuclear thinking. Our old concerns to prevent an arms race, our advocacy

of 'No First Use', the principle of civilian supremacy are all there in the new doctrine.

There are two aspects of the doctrine that make me unhappy. The first is the apparent absence of technology in the doctrine, which is surprising. All these years when the scientists were in sole possession of nuclear policy, India was upto date with technology, but deeply deficient in doctrine. With the writing of the draft doctrine, the pendulum suddenly seems to have swung the other way. Now we appear to have plenty of doctrine and not enough technology. The country has now opted for a second strike, and also for a minimum credible deterrent. Quite clearly only technology or sheer numbers can ensure the survivability of India's nuclear arsenal, if with just a few systems, the country can guarantee a second strike, after absorbing a first strike. What the doctrine commits itself to is an arsenal and a command and control system that is indestructable, for only then can the country's second strike be credible. This really means a hardened National Command Post, an equally well hardened, alternative command post, an arsenal in which there are no fragile delivery systems, like aircraft operating from air fields, well engineered high blast and dispersed missile system, and a strategic communication system that has primary, secondary and tertiary backups. In other words, a second strike system is heavily technology biased. The doctrine strives to give the country the benefits of a credible second strike, but I personally find nothing in it that contains a matching commitment to the technology required for a second strike. In fact, its commitment to a triad is deeply disturbing, for all the arms of a triad do not have the same levels of survivability relative to one another. One system is definitely more survivable than the other, and a minimum credible deterrent force should have had only the one chosen system. Inter-Service rivalry seems to have intruded into the doctrine at an early stage.

Nuclear Signalling

How has the doctrine met the needs of the country during the last four tumultuous years in which we have seen one border conflict, innumerable disparate acts of terror aimed at our heartland,

and one year long mobilisation for war? Doctrines are tested by signalling between the two sides. After the nuclear tests the first signalling occurred during Kargil. The serious fighting started in the third week of May 1999 and the first signal came from Pakistan in the first week of June 1999, when our forces were well within our side of the Line of Control (LOC). Now, while we were publishing our nuclear doctrine, the signals from Pakistan were that, should Indian conventional superiority result in deep territorial inroads, Pakistan would cross the line called the nuclear threshold. There had been no messages from India challenging the Pakistani thesis. Many Indian speakers had used India's commitment to 'No First Use' to embarrass the Pakistani delegates by suggesting that they too declare a 'No First Use'. But, as the weaker conventional party they were more or less relying on First Use as a compensating strategy. Now here we were, in Kargil, with a war on our side of the LOC, not even the International Boundary (IB), and here was Pakistan indulging in nuclear signalling to say that, should we cross the LOC, we may approach the nuclear threshold. As in such cases, the signal came from a junior Minister which could always be disclaimed should things get serious.

The Indian side quite rightly ignored the signal and treated it with scant respect. However, after the conflict was over, a lobby in Islamabad began to whisper, that in fact the Indians had been deterred by aggressive nuclear signalling; otherwise why should they have not crossed the LOC and made life easier for themselves. Fortunately, the mainstream strategic community in Islamabad did not believe that India had been deterred, but as you can see the process of signalling and shaping each other's doctrine had begun. The Indian answer to Islamabad's signalling took place, probably in January 2000, when both the Raksha Mantri (RM) and the Army Chief made statements to get Pakistan back into what I might call Neutral. The RM's statement was to the effect that limited conventional war was possible in the modern age. I assume that what he meant was that there was a bracket – the upper limit of which was a decisive war, and the lower limit was - no more conventional war, that the Indian view was that within this bracket a conventional war with limited aims could be fought. After the RM, the Army Chief spoke to say that "space still existed for limited

conventional wars." As you can see, the Indian attempt was to push the idea of a territorial threshold back from the LOC or IB to somewhere inside Pakistan.

These statements did not cause any concern in Islamabad, because in real terms, that was exactly what they had been saying all along. The Pakistani doctrine had always been that they had the conventional strength to fight a defensive war, in which if things went wrong and they lost territory – vital territory – they could get out of adversity by threatening nuclear First Use. Islamabad now assumed that the Indians were saying pretty much the same thing. Now depending on what each individual thinks – this could be good or bad. Good because there seems to be agreement on both sides on where the nuclear threshold lies. Bad - because, in effect, India's conventional superiority had now been neutralised.

This is where nuclear doctrine impinges on our long-term security. If India and Pakistan were good neighbours, living amicably across a common border, a mutually agreed position for the nuclear threshold would be stabilising. In the subcontinent, Pakistan is a dissatisfied state seeking to upset the territorial status quo that India is satisfied with. What Pakistan's overall strategy appears to be is to indulge in low intensity war at any level. If the Indians use their conventional superiority, then yell loudly that the nuclear threshold has been reached. It is in this context that we must realise that Indian policy makers are confirming to the Pakistani's viewpoint that their strategy is correct, when we say that only limited conventional war is possible.

We need to look carefully at the respective doctrines as we approach the nuclear threshold. Our doctrine is that, retaliation would be so massive, if we are attacked, that no one can attack us and survive. Pakistan's doctrine is that, if they are pushed into a very bad situation they will use nuclear weapons. Obviously the two doctrines clash in every possible way – hence the fear of nuclear instability in South Asia. At the moment of arriving at the nuclear threshold Pakistan says that it is not deterred by our second strike, and will launch a first strike, if pushed to the wall. Pakistan's nuclear arsenal appears to be to deter serious conventional war while our arsenal is purely to deter nuclear war. There is obviously

a strategic gap between the two and this gap will have to be bridged over the years by careful signalling.

How has the signalling gone, since Kargil? In the year 2001 we had the case of the Italians who met the Chief of Pakistan's Strategic Planning Directorate (SPD) and came here to tell us that there were four thresholds - a territorial, an economic blockade (Navy), a destruction of strategic assets (Air Force) and a loss of civil cohesion (RAW). No one in India has taken this seriously and recognised it as another attempt to lower the threshold. We could have easily lived with these bargaining attempts if we hadn't nearly shot ourselves in the foot over *Operation Parakram*. Now, I accept that there are many perceptions in India about *Operation Parakram* and its effectiveness or otherwise. But nuclear stability is all about perceptions – not reality. If after Kargil there was only a whisper that India had been deterred – after *Operation Parakram*, the whisper has grown to a loud murmur. The number of people in the strategic community in Islamabad, who feel that this time India was deterred from taking action by both the conventional and nuclear forces of Pakistan, have swelled. This is an unfortunate development for nuclear stability, which really means that it will take much more signalling to establish an understanding, or to bring Pakistan back into the box.

Two questions arise, to which I may not have the answer. If signalling is what is resorted to, to influence the doctrine of the other country, how does one country prevent some uninformed Minister from saying something that sets off the other side? When asked this question of Sir Michael Quinlan his answer was that each country rapidly gets an idea of which Ministers to listen to and which Ministers to ignore. The second question is – if one of the countries gets or is given a wrong perception, how can it be corrected? The answer was that this is a long-term business and may often take years. For instance, if Pakistan believes that it can deter India from ever crossing the IB, in response to aggression, this is potentially dangerous. The advantage that we have now is that, at last, we have an Integrated Staff, a Strategic Force Commander and the nearest thing to a nuclear planning group – which brings me to command and control.

Command and Control

Many of you may have visited the deep basement below the Pentagon, to the National Command Post, or been to the control room of the strategic command in Omaha. I have been to the old British strategic command post in Northwood, so one gets a good idea of how most countries set up their command and control apparatus. The United States, the erstwhile USSR and the nuclear powers, including China have a National Command Post (NCP) and Alternate Command Post (ANCP) - and so does Pakistan. The NCP has the National Command Authority (NCA), in our case, the Prime Minister (PM), and the ANCP has the number two. Below this level there is the Strategic Command HQ which is in Omaha in case of the US and at a site outside Moscow, in the former USSR. This is a central headquarter from which all nuclear assets are controlled. Down to this level there is no variation in any country, except perhaps Pakistan, which may have combined the NCP and the Strategic Command HQ. Below this level every country has a different system. The Russians have a separate Service called the Strategic Rocket Forces while the Americans operate through their Area Command Headquarters. Since the major decisions about our country have already been taken, we can assume that the command and control apparatus is in the pipeline, and the Integrated Defence Staff (IDS) is now an identifiable body charged with writing out the organisation for the custody, transportation, accounting and maintenance of nuclear ordnance.

Stockpile To Target Sequence

In all those years when the military was out of the loop, it was impossible to either write the doctrine or establish the procedure for what the Americans call the 'Stockpile To Target Sequence' (STTS). I would not like to go too deeply into the jargon of nuclear command and control. There is a real body of literature, not to forget the book by Lieutenant General Pahwa, which is a product of a Fellowship at the USI. But the stockpile to target sequence or STTS is too important a concept to exclude from a talk on nuclear command and control. The STTS describes the sequence in the life of a nuclear warhead from the time it leaves the store of the

Department of Atomic Energy, is cleared for issue, is transported to the user location, the method of transportation, the procedures of accounting, its storage with the user service, the mating of the warhead with the carrier, the loading of the carrier missile into the platform, the environmental condition of the platform, the preparations to fire, the interlocks, the flight sequence and the arrival on target.

Role of Integrated Defence Staff

When discussing India's command and control what makes me more than satisfied today is the presence of the middle seniority officers in the IDS who are tasked with setting up our nuclear command and control. I personally have a lot of faith in senior commanders and young captains who do the real staff work of the Services. Over a period of six to eight years, these incumbents in a staff job generally tend to cover all that needs to be covered, whether the overall system is correctly set up or not. What invariably paralyses our staff is their failure to access finance. I understand the IDS in this financial year has been given money on the capital account, and that is the most welcome news that I have heard for a long time. As long as the IDS continues to understand the importance of accessing finance, and continues to get that money, the staff will not suffer for the absence of a Chief of Defence Staff (CDS).

There are great hopes placed on the IDS. The years of leaving the military out of the loop are over. As we all know it is only the military that knows how to run a staff organisation in support of a commander. And by a staff, I do not mean a secretariat, because civilians often use the word staff when they mean secretariat. We can also understand, in a way, why in all the previous years the leadership was wary of handing over the control of the nuclear arsenal to the military for once the military staff takes over, the military staff procedure starts to run – for better or for worse.

The military, now that it has been brought into the loop, are definitely going to want a say in the yields of our weapons, the ranges of our missiles, the hardening of our sites, the transportation rules, but most of all the military will establish the communications

that will enable the NCP to communicate with the strategic forces commander (SFC), and establish the communication between the SFC and the operational delivery units. Riding on those communications will be the permissive action links (PALs) that separate ownership from control.

During the period the IDS has been in existence much of the work that I refer to has probably been done, or is being done. So I will conclude with the most important decisions that face the IDS today – and that is the question of transparency. How much transparency should there be to what work they are doing. How much of their work should be kept secret? The test of whether IDS activity should be transparent or not is whether a public disclosure of what is being done strengthens deterrence, promotes stability or whether a public disclosure will benefit the enemy. For instance –

- (a) Who follows the Prime Minister in the line of succession? Secrecy on this issue weakens deterrence.
- (b) Has India established NCP as well as an ANCP? If the answer is yes, public disclosure strengthens deterrence. If nothing has been done, better keep quiet.
- (c) Are our weapons fitted with PALS? If yes, public disclosure benefits deterrence. If not, it encourages the other side towards first use.
- (d) Is the NCP and ANCP hardened? If yes, saying so strengthens deterrence. In any case disclosing their geographical position is not advisable.
- (e) Should the arsenal size be disclosed? The stronger aspects should be disclosed. Totals should not be disclosed.
- (f) Should yield and accuracies be written about with the country's reliance on a second strike? Disclosure of larger yields strengthens nuclear stability - particularly in our case where we hope that deterrence will work in the course of a conventional conflict.

In this way, the work done by the IDS must begin to affect and influence routine nuclear policy. In any case, with the IDS entrusted with what I might call nuclear rule writing, the routine aspects of nuclear policy cannot be decided anywhere else. For the Services, the opportunity to run the nuclear command and control is a great one. The Services have three choices. One is to miss the opportunity altogether. The second is to misuse the opportunity in the way that the American targeting chain produced absurd numbers. The third choice is to be wise and strong – to take firm control of the process yet temper our determination with the knowledge that we are dealing with weapons of mass destruction (WMD).

AUTO WHEELS

(THE CAR FINANCE COMPANY)

B-4, VISHAL CHAMBER, SECTOR-18, OPP, MC-DONALD'S, NOIDA

TELE : FROM DELHI 95120-2514408, 2514409, 2515828

STD CODE FROM OUTSIDE DELHI AREA 0120

MOBILE : 9810129544

- ☛ BUY AND FINANCE YOUR CARS FROM CSD AND SAVE UPTO RS. 85,000/- OVER LOCAL PRICES.
- ☛ OFFER OPEN FOR ALL SERVING/ RETIRED OFFICERS AND ALSO FOR BELOW OFFICER RANK DRAWING LAST PAY OF OVER RS. 10,500/-.
- ☛ CARS AVAILABLE THROUGH CSD ARE ALL MARUTI MODELS, SANTRO, ACCENT, FORD IKON, INDICA, SUMO, SAFARI, OPEL CORSA, QUALIS, PALIO, AND ALL TATA COMMERCIAL VEHICLES.
- ☛ FASTEST DELIVERY FROM CSD THROUGH AUTHORIZED DEALERS IN PUNJAB WITH MINIMUM FORMALITIES FOR CAR LOANS AT LOWEST RATES.
- ☛ USED CAR EXCHANGE FACILITIES ALSO AVAILABLE.
- ☛ FOR FURTHER DETAILS CONTACT :-

SQN. LDR PJB. KHORANA (RETD)
PROPRIETOR

Taiwan : Strategic Assessment 2003

Lieutenant General Vijay Oberoi, PVSM, AVSM, VSM (Retd)

Introduction

I was invited to participate in a seminar in Taiwan. The Institute of International Relations (IIR) affiliated to the National Cheng-chi University and the National Strategic Studies Institute (NSSI) of the National Defence University (NDU) of Taiwan organised a joint seminar, which was called a Roundtable Discussion. The seminar was held over a period of five days, from 28 October to 1 November 2002, at the Howard International House (HIH), Taipei. This was the first such seminar organised by the NDU, and one of the important aims was to provide inputs to the Government of Taiwan for formulating its strategic assessment for 2003. The topics were arranged sequentially and comprised Global, Asia-Pacific, PRC (People's Republic of China) factors, military developments of PRC, and other issues.

Session I

The subject of Session I was "International Factors that Influence Taiwan's Strategic Environment". Four papers were presented. Dr Edward I-Hsin Chen of the Graduate Institute of American Studies, Tamkang University, presented the first paper, titled "Changes of International System". The paper covered the following aspects :-

- (a) The US-led strategic and security network targeting China.
- (b) The new "strategic clarity" doctrine of the USA, towards both Taiwan and China.
- (c) The transformation of the international economic system as a result of economic integration, strategic economic alliances, and the formation of free trade areas.

Lieutenant General Vijay Oberoi, PVSM, AVSM, VSM is a former Vice Chief of the Army Staff and a member of the USI Council.

Journal of the United Service Institution of India, Vol. CXXXIII, No. 552, April-June 2003.

The second paper titled "War on Terrorism: An Analytic Overview" was presented by Dr Juichou Richard Hu of NSSI. The paper analysed the changes in relations between the USA and major powers like Russia, Japan, China and countries of Europe, from the perspective of the global war on terrorism. Their effect on the international system and the impact on Taiwan's strategic environment were brought out in some detail.

The third paper dealt with economic issues and was titled "Economic Integration and Globalisation". It was presented by Dr Mignon MJ Chan of the Taiwan Institute of Economic Research. It discussed economic integration, globalisation and its backlash, the impact of the war on terrorism on economic integration, and challenges of economic integration for Taiwan. The paper concluded that the USA had taken advantage of the war on terrorism, to condition or determine the behavior of countries towards global economic issues. It also concluded that the war on terrorism had impeded globalisation and disrupted global economic activities.

Professor Zong-Ji Yu of Fu-Hsing-Kang College and Colonel Hung Chin Shieh of the NDU presented the fourth paper jointly. It was titled "Regional Conflicts and Their Implications for Taiwan". The paper brought out how Washington had successfully used the 'either foe or pal' doctrine in the war on terrorism, as a structured factor, together with its military and economic superiority, to influence regional conflicts like India-Pakistan, Israel-Palestine and North and South Korea. It had persuaded the concerned countries to negotiate instead of adopting a confrontationist posture. The paper also reflected on how these affect the security of Taiwan. Four conclusions reached were as under :-

- (a) If the USA shows any tilt towards China or Taiwan, it may trigger a war.
- (b) While the security guarantees of the USA are important, Taiwan must continue to have a strong defensive capability.
- (c) Nuclear deterrence ensures military restraint when both opponents are nuclear powers. However, when only one side has nuclear weapons, a war is more likely. For Taiwan, asymmetry is a reality. Hence the need for a nuclear umbrella.

(d) The US role in the security of Taiwan continues to be important. However, the USA will ensure that regional conflicts do not impinge on its war on terrorism. Taiwan's fear is that the conciliatory stance of the USA for China's support in the war on terrorism may dilute the US backing for Taiwan.

The discussants for Session I were Professor Gaucheng Wang of Tamkang University; Professor Desmond Ball of the Strategic and Defence Studies Centre, Australian National University; and Professor Yong-Sup Han of the NDU of South Korea. Some of the important remarks of the discussants were as under :-

(a) Strategic competition between the USA and China is inevitable.

(b) The US National Missile Defence (NMD) deployment is aimed at China rather than against 'Rogue States'.

(c) The USA appreciated that the Russian nuclear threat has been enervated and hence the agreement to reduce strategic warheads from 7200 to between 1700 and 2200 by the year 2012. A direct consequence is that the weight of the US strategic nuclear targeting will be on China.

(d) The US NMD programme is detrimental to stability and security in the Asia-Pacific region. It is producing negative consequences in terms of arms control and arms race stability – prompting Chinese and Russian countermeasures.

(e) There were many issues between China and the USA, besides terrorism, and hence the USA was expected to play a balancing role.

(f) It is too early to judge in which direction the Bush doctrine would lead the world and the United States in the long-term. The US unilateralism harbours discontent from the traditional allies, viz Europe, East Asia - in particular Seoul and Tokyo.

(g) Independent of the US unilateralism, the number and frequencies of small scale and low intensity conflicts are likely to increase over time.

(h) The Bush Administration regards China as a potential competitor and wants to be vigilant against China till it becomes democratic.

(j) For the present, China feels that it is not prudent to oppose the United States on global issues, so as to gain time for economic development and military modernisation.

(k) National security is changing its nature, from protecting national boundaries to free flow of peoples and materials. This is even more important at a time when the world is entering the era of information and knowledge.

(l) Nation specific military threats have become less relevant than transnational threats, because nation states have begun to shift their focus from national defence to regional and global defence, to ensure a safer and a more secure world.

(m) Taiwan needs to strengthen its defence capabilities, so that it is not treated by China as only an economic power, which is dependent on the USA for its security.

Session II

The subject of this Session was "Asia-Pacific Factors that Influence Taiwan's Strategic Considerations". A total of six papers were produced, but only four were presented.

Dr George Wei Tsai of the IIR, National Chengchi University, presented the first paper titled "United States Asia-Pacific Strategy and Security Policy". The main aspects covered were :-

(a) The US strategy in the Asia-Pacific region is two-fold. Firstly, to maintain regional political stability and economic prosperity, and secondly, to prevent the emergence of a new hegemonic power, which can challenge the US supremacy.

(b) In future, changes in cross-Straits relations, problems of the Korean Peninsula and the South China Sea, the hegemonic and unilateral practices of the USA, China's growth and its untamed behavior, will affect regional security.

(c) China is not satisfied to play the role of only a regional power. China expects to become a global power in the future.

(d) For Taiwan, neither a strong and bullying China nor a divided and even collapsed China will serve its interests.

(e) A new concept of comprehensive, cooperative, equal and peaceful security is needed in the Asia-Pacific region.

The second paper titled "The US-Japan Alliance versus Taiwan Strait Security" was presented by Colonel Kuang-fu Tong of NSSI. It was brought out that the US-Japan Alliance has consistently played a vital role in regional stability and peace. The strengthening of the US-Japan Alliance will enhance Taiwan's role to contain China. In terms of geography, Taiwan is located within the conflict zone, where the spheres of influence between the US and China are overlapping. Taiwan does receive intangible benefits from the US-Japan Alliance, in maintaining Taiwan Strait stability, but not without some negative effects. As a withdrawal of the US troops from Japanese bases would have adverse effects on the stability of the Taiwan Strait, it is prudent for Taipei to seek proper countermeasures as early as possible.

Dr Ming Lee of the National Chengchi University wrote the third paper "Emerging Regional Powers". The paper covered a number of issues, including the economic and political developments in the Korean Peninsula, relations between North and South Korea, role and behavior of China in the Korean Peninsula, and the impact of the Korean Peninsula on the cross Taiwan-Strait security. The following points were emphasised :-

(a) China's speedy economic development makes it the destination of more foreign investment, making it one of the major economies of the world.

(b) Major countries in East Asia tend to accede to Beijing's demand that Taiwan is a part of China, and do not appreciate its independent existence. Except for the participation of Taiwan in Asia Pacific Economic Cooperation (APEC), Taiwan has not been accepted by most of the international organisations or forums. Taiwan is the only country that is not invited to the

ASEAN Regional Forum (ARF), although scholars from Taiwan are allowed to attend the second track 'Council of Security and Cooperation of Asia-Pacific (CSCAP)', on an unofficial basis.

(c) The Republic of Korea (ROK) has stated that it is not interested in developing the US-led Theatre Missile Defence (TMD), so that it does not provoke North Korea.

(d) The Korean Peninsula is unlikely to have a major war, no matter how the reconciliation between North and South Korea progresses.

Dr Rong-yung King of the IIR of the National Chen Chi University presented the fourth paper, titled "Asia-Pacific Regional Security Mechanisms". The presentation brought out that the region has many flashpoints that can trigger military conflicts, and none of the regional security mechanisms seem to be able to bring down the risks effectively, whether it be the India-Pakistan conflict, China's increasing deployment of mid-range missiles threatening Taiwan, or a host of regional terrorist activities. Furthermore, none of the countries seem to be able to cope with the region's economic, political and social injustice with a broad-based policy. This helps a host of radical organisations to thrive. Cross-strait political relations are not expected to undergo decisive changes within a short time. Any military conflict is likely to bring in US intervention, inevitably leading to nuclear war between the USA and China.

Colonel Ming-Shih Shen of the Fu-Hsing-Kang College wrote the fifth paper. The subject was "Newly-Emerging Regional Powers (India and Australia)". It stated that President Bush regards China as a competitor to the US, instead of a strategic partner. China seeks to destabilise the balance of power in Asia, instead of maintaining the status quo. The US allies in the region largely refer to three countries; Japan, South Korea and Australia. The expanding ally refers to the regional power, India. The US is likely to seek support and assistance from India in dealing with Asia-Pacific issues in the future. Other issues highlighted were as under :-

(a) Australia remains a dependable ally of the USA. The ASEAN countries have become Australia's second largest

offshore market. Australia has been looking to play a more active role with ASEAN, although the long-term opposition of Malaysia and deteriorating relations with Indonesia due to East Timor issue have adversely affected Australia's influence in ASEAN. Maintaining a strong alliance with the USA has become Australia's highest strategic mission. The US bases and other facilities in Australia are now monitoring naval and air force activities, as well as communications of China, Russia, Indonesia, and Pakistan.

(b) India has three strategic objectives, viz, to strengthen its dominance in Southeast Asia; to maintain its military supremacy in the Indian Ocean; and to maintain sufficient military forces that would improve its standing in international society. It asks for non-militarisation of the Indian Ocean and emphasises bilateral interactions. India is keen to see the emergence of regional trade groups, and has shifted its economic focus to global trade. It realises that successful domestic economic development is tied to the economic trends across Southeast Asia. India thinks that China, at present, falls short of becoming a hegemonic power. India has developed its nuclear capability, as a bargaining chip, should the relationship with China go wrong. India believes that the ongoing economic development will serve as a viable means in responding to China's competition and threats.

(c) Neither Australia nor India give crisis management across the Taiwan Strait any strategic priority, because the influence of the two actors will remain limited and in fact they are only capable of secondary roles in issues relating to the US-China relations. Taiwan should strive to interact with Australia and India in military exchanges, trade and economic issues.

The sixth paper, by Dr Andrew Chou of NSSI, NDU, dealt with the subject "United States Cross-Strait Policy". The paper stated that the US strategic interests in relation to Taiwan were, firstly, the US commitment to the defence of Taiwan, which shows the US as a reliable hegemonic power in the Asia-Pacific; secondly, democracy in Taiwan constitutes a model to exemplify American

values in Asia; and thirdly, Taiwan serves as a strategic way out, if the US strategic engagement with China fails. The Bush Administration, in dealing with cross-Strait conflict, has enunciated the policy of strategic clarity instead of strategic ambiguity. Strategic clarity emphasises that while China should refrain from using force, Taiwan should reject the idea of declaring independence. The military imbalance between China and Taiwan has become the focus of concern amongst the US policy makers. It is anticipated that the US policy of arms sales will become more manifest with the present Administration and provision of arms will continue in accordance with the Act of Taiwan Relations.

The discussants for Session II were Professor Steven Metz of the Army War College, USA; Professor Bantarto Bandoro, University of Indonesia; Professor Arthur Ding of IIR, National Cheng-chi University; and Dr Fu-Kuo Liu of the Ministry of Foreign Affairs, Taiwan. Important remarks of the discussants were as under :-

- (a) Those who believe that China's aggressiveness stems from insecurity, conclude that the best approach to deal with China is engagement and investment. Those who believe that China's aggressiveness cannot be placated favour containment.
- (b) Many states in the Asia-Pacific region have the technological prowess to develop weapons of mass destruction. So far, most have not done so, since the political and strategic costs appear to outweigh the gains.
- (c) The aims of US policy in the Asia-Pacific region are, firstly, to maintain the stability of its economic and military presence; secondly, to provide protection to the US allies and friends; thirdly, to prevent the emergence of new hegemonic powers; fourthly, to promote the development of human rights and democracy; and fifthly, to promote further dialogue on the future mechanism for security relationships that would serve as deterrent against unexpected regional turbulence.
- (d) India and Australia are both important actors in their respective regions. Both are part of regional power

configurations on account of the political and security linkages they have with the United States.

(e) After the 11 September 2001 terrorist attacks, the US policy toward China has had a change. China is now regarded as a cooperator. There have been frequent intelligence exchanges and the Eastern Turkish Movement, which has long advocated independence in Xinjiang region, has been declared as a terrorist group. Nevertheless, cooperation on the anti-terrorist front has not reduced the US concerns toward China.

(f) The US-Taiwan security is a function of the US-China security. If the US perceives a rising China threatening Taiwan, and jeopardising the leading role of the US in the Asia-Pacific region, the US-Taiwan security ties will get a boost.

Session III

The subject covered by the third session was "PRC Factors that influence Taiwan's Security Environment". Five papers were presented in this Session.

Mr York W Chen of the Centre for Taiwan Defence and Strategic Studies presented the first paper titled " PRC's Security Concept and its Strategic Trend". It stated that the PRC faces a relatively peaceful external environment, with possible threats, if any, on its periphery in the form of local or limited conflict. China is a rising power, whereas the decline of the US is inevitable. Although economic reforms have primacy, the leadership of the PRC is very sensitive and concerned about political implications of economic reforms. The PRC's foreign policies are aimed at shaping a stable external environment, which is favourable for its economic development. Central and Southeast Asia are two foci of the PRC's multilateral participation. The PRC's leadership is suspicious of the US unilateralism, especially the US supporting Taiwan. The PRC's military modernisation is not only a symbol of great power status, but also, aims to cope with possible local and limited conflicts.

Mr Min-Rei Zhang of the Taiwan Strategy Research Association presented the second paper, titled "PRC's Military

Capabilities". According to the paper, the priority of the PRC's military focus is on the transformation towards second-generation nuclear forces, modernisation of her navy and air forces, information warfare and infrastructure improvement. The nuclear warfare strategy has changed from 'minimum nuclear warfare' to 'limited nuclear warfare'. According to the US assessment, the PRC is likely to have around 100 ICBMs aimed at the USA. The army is working on a small digitalised, specialised, joint combat force organisation. The navy is gradually being transformed to a blue water navy. The focus of the air force is in developing a day-night, all weather, all terrain, early warning, beyond visual range strike ability and the acquisition of new multi-function fighters, strike aircraft and transport aircraft. It is assessed that by 2005, the air force will be able to gain superiority over the Taiwan Strait.

Professor Kuang-Yi Wang of the Research Institute of International Affairs and Strategic Studies, Tamkang University, and Mr Po-Chang Shu of the Taiwan Strategy Research Association jointly presented the third paper, titled "Importance of PRC's Economic Development". It brought out China's World Trade Organisation (WTO) accession having become a fact; China is now part of the global economic trends. China's current preoccupation is on how best to secure a strong footing in the globalisation process and how to avoid economic crises. As China and Taiwan entered the WTO in succession in 2001, some analysts think that China will now need to open some type of official dialogue with Taiwan. However, China remains firm with its one-China policy. Others feel that chances are slim of Taiwan gaining any political advantage on account of the WTO membership.

Professor Dao-Ming Tian of the Fu Jen Catholic University presented the fourth paper on "PRC's Social Change". It was brought out that following the opening up of the Mainland economy, the people on both sides found themselves chasing short-term profits, but different political structures resulted in a number of negative phenomena, including anxiety-driven social instability in Taiwan. There is no real basis for mutual understanding and dialogue between Taiwan and the Mainland. As long as there is no free interplay between the two civil societies, it is unlikely that the civil societies will be able to exert any control on the respective governmental policies.

Professor Cheng-Chuan Shih of the Research Institute of International Affairs and Strategic Studies, Tamkang University and Colonel Chin-Chang Pan of the NDU were the joint authors of the fifth paper, which was titled "PRC's Political Development". The paper highlighted the present political system; the fact that the Party had priority over all aspects of the country – reflected by the phrase 'Party Lead'; the role of the Central Political Bureau and its Standing Members; and the importance of the "Three Representatives" – Marxism and Leninism, Mao's ideology, and Deng's theory – which give direction to the PRC. The policy towards Taiwan continues to be reflected as 'Three Perishing Policy', which is-perishing Taiwan's formal ties with other states; perishing Taiwan's international standing; and perishing Taiwan's bargaining chips with the Mainland.

The discussants for Session III were Mr William Lin of the Ministry of Foreign Affairs, Taiwan; Dr Denny Roy of the Asia Pacific Centre of Security Studies, USA; Major General Tai-Hsing Fu, Deputy Commandant of the War College of NDU; and Professor Chien-Peng Chung of Nanyang Technical University. Important remarks of the discussants were as under :-

- (a) Critical problems that a faltering China has confronted are environmental degradation; unemployment; corruption; separatist conflicts, and China's accession to the WTO.
- (b) The Pentagon's report published in July 2002 concludes that PLA's modernisation has improved both China's nuclear deterrence against the US, as well as its operational capabilities for contingencies in East Asia. The report also warned that PRC's ability to exercise military options presents challenges, not only to Taiwan, but also to the Philippines and Japan.
- (c) China believes that a powerful country must have a powerful military.
- (d) China's compliance with WTO could be somewhat problematic because of a number of factors.
- (e) Taiwan has developed a self-sufficient economy for many years. Interactions on trade and investment with the Mainland are, therefore, not obligatory.

(f) Taiwan is not only a society of migrants but also has developed itself with a unique character and is internationalised.

(g) The monopolised decision making system, 'democratic authoritarianism', and the Communist one party rule are the reasons for upholding its totalitarianism regime in China.

Session IV

The subject of the fourth session was "The Modernisation of PLA". Five papers were presented in this session.

Colonel Kaijung Sung of NSSI, NDU presented the first paper, which was titled " PLA's Weapons of Mass Destruction". The paper covered the current developments of nuclear weapons in the arsenal of the PLA; the organisation of the Second Artillery; current operational doctrine; and future trends. The author highlighted that the focused effort of the Second Artillery in the near future was modernisation and readiness. The eventual objective was to have both an elite and effective strategic nuclear force and a conventional missile force.

Dr Liao of the Taiwan Research Institute presented the second paper titled "PLA's Capabilities on Information Warfare". The paper covered PLA's understanding of Information Warfare (IW); its Command, Control, Communications, Computer, Intelligence, Surveillance and Reconnaissance (C4ISR); precision strike; and electro magnetic pulse (EMP) attack capabilities. The paper highlighted that the PLA is believed to be developing radio frequency (RF) weapons to simulate a non-nuclear EMP explosion. China's IW concepts subscribe to the notion of "the inferior defeating the superior". At present, the PLA is far behind the USA in IW capabilities. Even if the PLA were able to develop certain 'asymmetric' capabilities, it would still be unrealistic to expect the PLA to come up to the levels of the USA. China is at present concentrating on fighting a 'regional war under high-tech conditions'. The PLA lags behind, by nearly a generation, in the evolution of military technology, and depends on a relatively unsophisticated population for its manpower.

Dr Liao of the Taiwan Research Institute also presented the

third paper, titled "PLA's Space Technologies". The paper covered China's space launch capabilities; communications satellites; reconnaissance satellites; and navigation and precision strike capabilities. It was assessed that in the past few decades, China has accumulated significant space-related technologies and experience. The PLA has established a satellite-based military communications network, linking its General Staff department and major military regions. By 2000, the PLA had developed and deployed a host of communications and reconnaissance satellites to advance its C4ISR capabilities. Military satellites include the Point-series reconnaissance satellites; DFH-series communications satellites; Wind and Clouds-series meteorological satellites; Twin Star navigation satellites; and Beacon-series remote sensing satellites. In time, PLA's C4ISR capabilities will increase as more systems are procured and deployed. However, China's space capabilities are still constrained by its relatively feeble national wealth and low technological levels.

Dr Han Hua Chen of the NSSI, NDU presented the fourth paper, dealing with "PLA's Modernisation and Force Transformation". The paper covered budgetary aspects; future direction of PLA's force transformation; the ballistic missile force, including its future development; and building of new forces for the 21st century, which include the PLA's Expeditionary Force, cruise missile force, directed energy weapons; and building a space force. The policy of high-tech orientation has moved PLA's military capability to a higher level and has disturbed the military balance in the Taiwan Strait.

Colonel Ti-Hsiang Wang of the NDU presented the fifth paper, titled "PLA's Joint Operations Capabilities". The author covered the conceptual development of the PLA's joint operations capabilities; its joint war-fighting doctrine; joint organisational structures; the current state of joint exercises; and the limitations in joint war-fighting development. According to the author, the PLA commenced emphasising joint operations from about 1993, as it was greatly influenced by the Gulf War of 1991. However, most analysts currently assess joint combat capability as low.

The discussants for Session IV were Professor Alexander Huang, IASS, Tamkang University; Captain Te-Men Chen, Chief

of Staff, NDU; and Mr John F Feeley, Naval Postgraduate School, USA. Major points made by the discussants were as under :-

- (a) China's military spending, in realistic terms, is increasing at a double-digit rate, enabling the PLA to rapidly expand its state-of-the-art nuclear and conventional weapons.
- (b) China's strategic missile force provides it a deterrent and a viable second-strike capability. By about 2010, missile forces may be the cutting edge of power projection.
- (c) China, though not a leader in RMA (Revolution in Military Affairs) warfare, has formidable IW capabilities within its geographical sphere of influence.
- (d) China is developing a family of cruise missiles, including air, surface and ship launched versions, with ranges from 600 to 1800 kilometres.
- (e) The Chinese military is impressive in size, but underwhelming in technological sophistication. In the last few decades, the military doctrine of China has shifted from being largely defensive to focusing on 'active defence', to a focus on force projection and offensive, rapid-strike capability.

Session V

The subject of the last or fifth session was "Other Factors that Influence Taiwan's Strategic Environment". There were six papers written for this session, but only four were presented.

Professor Chaw-Hsia Tu of the Chuang Hua Institution for Economic Research presented the first paper. It was titled "Free Trade Zone and Taiwan's Economic Security". It covered multilateralism versus economic sustainability; sustainability logistics to an evolving market economy system; economic sustainability under the free trade zone; and globalisation versus economic sustainability. It was brought out that Taiwan already has a free market system, but a major challenge in the overall strategic environment lies in mainland China's transition from a centrally planned socialistic system into a market oriented economic system. As mainland China's economic and trade system is in

transition, the cross-Strait gap will gradually narrow. China is actively seeking regional free trade alliances. The complete mapping of an ASEAN free trade zone can further deregulate the Chinese economic and trade system, and this will in turn effectively narrow the disparity of the economic system across the Taiwan Strait.

Professor Kuang-Yi Wang of the Research Institute of International Affairs and Strategic Studies, Tamkeng University, and Mr Po-Chang Shu of the Taiwan Strategy Research Association were the joint authors of the second paper titled "Cross-Strait 'Three Links'". The 'three links' discussed were mail exchange; cross-Strait sailing; and the direct trade. It was brought out that cross-Strait exchanges would invariably bring forth issues that would challenge Taiwan's polity, economy and society. These issues reveal an imbalance in cross-Strait exchanges. The entry of the two sides into WTO provides a niche for cross-Strait relations to move forward. While China's purpose is to attract continuous investment from Taiwan and reduce the possibility of Taiwan disassociating itself from China, Taiwan needs to weigh comprehensively regarding its economic sustainability and future economic development.

Mr Li-Ming Lee of the Taiwan Strategy Research Association was the author of the third paper titled "Confidence-Building Mechanisms". He brought out that since 1998, the government of Taiwan has reiterated its intention to institute a cross-Strait military confidence building mechanism. Many countries already have such mechanisms with China. They include Russia, Kazakhstan, India, Vietnam and the United States. The major stumbling block is China's insistence that no negotiation is possible unless it is conducted under the one-China principle.

Professor Sheau-Yuan Song of the Centre for General Education, Central Police University was the author of the fourth paper titled "Multi-National and Non-Traditional Threats". The paper brought out the various non-traditional threats which affect Taiwan, including drug abuse; trafficking of people and illegal entry; illicit trafficking activities; and cyber crimes. In the past, such activities were treated as purely law enforcement problems. However, such activities have now become highly sophisticated and threatening,

and are detrimental to individual health, lifestyle, social order, as well as economic development and security.

Professor Yuh-Woei Wang of the Central Police University presented the fifth paper, which was titled "International Non-governmental Organisations". After analysing various forms of non-governmental organisations, the author focused on Taiwan-related organisations. In June 2002, the Taiwan Government created the Taiwan Democracy Fund, for funding track two diplomacy and economic and trade diplomacy, with a view to strengthen Taiwan's political dialogue and cooperative ties with neighbouring countries. In August 2002, the Sino-Formosan Foundation was set up, with focus on the USA. It holds global symposiums, tries to globalise the Taiwan issue and acts as Taiwan's face on behalf of the political, academic and media sectors. Its aim is to develop a Sino-American and Pan-Asia policy favourable to Taiwan. It was also brought out that the information provided by domestic or global non-governmental organisations is not always precise or balanced, and there can well be some biased judgments. Areas of focus for such organisations include democracy, health, racial tension, regional conflicts and so on.

Professor Kung-Yi Wang of the Research Institute of International Affairs and Strategic Studies, Tamkang University presented the sixth paper titled "Global Cooperation in Policing International Crime - Taiwan's Efforts to Support Antiterrorist Campaigns". Terrorism has emerged as one of the crucial variables, which affects global security. While nearly all countries of the world are supporting the USA in its war against terrorism, this factor is unlikely to affect the global strategic framework, established over time. After the 11 September 2001 attacks, China had responded swiftly in supporting the US to fight terrorism. Taiwan too has steadily supported the US policy. Little has changed in Taiwan's pro-US stance and it sees no reason for the US to trade off Taiwan with China as a bargaining chip for China's support. The paper concluded that the post-11 September 2001 events would not alter the cross-Strait relationship between Taiwan and China.

The discussants for Session V were Professor Robert Dorff of the Army War College USA; Professor Philip Yang of the National

Taiwan University; Professor Andrew Yang and Rear Admiral Sumihiko Kawamura (Retd), Vice President, Okanaki Institute, Japan. Major points made by the discussants were as under :-

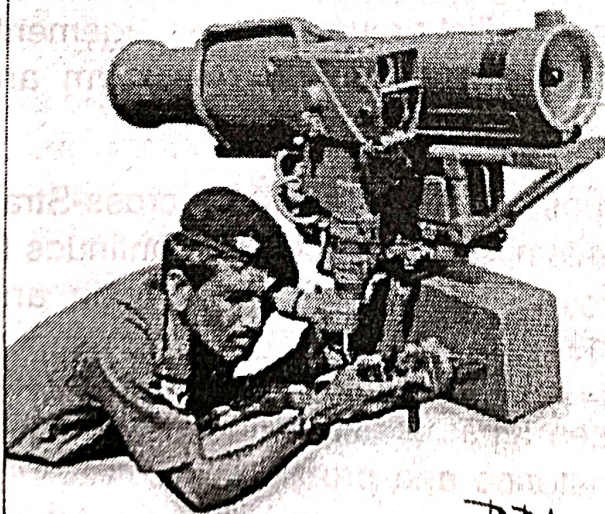
- (a) Security rests on the economic health of the country. Just as early warning is essential for conflict management, so too is early warning in the economic sphere. This applies to keeping a careful eye on economic trends in China, so as to minimise the negative consequences of severe economic dislocations in China spilling over to Taiwan as a surprise and resulting in economic shock.
- (b) Responses are appropriately pursued through the multilateral and institutional approaches, such as Free Trade Zones and the WTO. Care must be taken that China does not use these to hinder the ability of Taiwan to use the positive forces of liberalisation, trade, commerce, and globalisation for its own growth and development, and to promote unwanted dependence of Taiwan on China.
- (c) The 'three links' challenges have potential pitfalls that need to be avoided. Market-driven decisions, supported by proactive stances and effective coalition building in multilateral venues, are likely to be successful.
- (d) Taiwan's one over-arching national interest is to avoid military conflict with China. Conflict prevention, management, and confidence building measures to underpin them are essential.
- (e) It seems almost impossible to establish a cross-Strait conflict prevention mechanism, so long as China continues to take a back seat in cross-Strait conflict prevention and confidence building with Taiwan.
- (f) The security of the sea lanes is one of the fundamental prerequisites of the subsistence and prosperity of Taiwan.
- (g) The post-11 September 2001 US-China strategic relationship means that the East Asia security environment is currently in the process of creating a new dynamic equilibrium,

which will naturally have important repercussions for Taiwan's security.

Conclusion

The Roundtable Discussion was both illuminating and useful, not only in understanding Taiwan's security concerns, but more importantly, how China is viewed in its various facets. It would not be wrong to say that the two overwhelming areas of focus of Taiwan are developments of all types relating to China, on the one hand, and assessing the extent of support from the USA, on the other. Although not mentioned by any speaker, one could sense a certain degree of detachment on the part of Taiwan, in its relations with other countries of the region, viz. the Philippines, South Korea, and Japan, which also have many concerns with the rising power of China, in both the economic and military dimensions. They also have close economic and military ties with the United States. The major players in the Asia-Pacific region are undoubtedly China and the USA. It will not be wrong to state that the strategic focus of China continues to be the Asia-Pacific region for the present.

MISSILE MUSCLE



The first generation Anti Tank Missile Systems. Then on to second generation MILAN and KONKURS Missile Systems. And the sophisticated missiles under IGMDF.

That's how Bharat Dynamics Limited placed India on an exclusive plane in the field of missile technology. Designing, developing and producing missiles to suit the country's defence needs. BDL is also in the forefront in adopting latest IT tools of CAD, CAM, ERP solutions for higher productivity enhancement.

Accelerating the Corporate Business Transformation. The development and sustenance of effective Human Resources is seen as important as any other operational objective.

Etching each of its achievements into India's history. Each of them a landmark in missile technology. And each of them re-inforcing the strength of the Nation.



Bharat Dynamics Limited

(A Govt. of India Enterprise)

Kanchanbagh, Hyderabad - 500 058 Tel: 040 - 24340081.

THE FORCE BEHIND PEACE

Managing Technology – A Challenge for the Future

Captain Rakesh Vadhyar

The sword of technology cuts two ways. It can be used in offence- it can destroy and opponent even before his first lunge. But it can also cut the very hand that wields it.

Alvin and Heidi Toffler

Prelude

Warfare, over the centuries, has progressed from primitive wars between tribal societies to warfare between societies based on agrarian economy and further, to warfare between industrial societies. Mankind has progressed successively from fighting with bows and arrows to rifles, guns, tanks, aircraft and missiles. Scientific and technological advances though slow and gradual in 18th and 19th centuries, were dramatic in the 20th century. New and emerging technologies have the potential to not only influence the means of warfare but the whole concept, design and conduct of warfare in the 21st century.

Technology has always been used to produce improved tools of warfare. In the modern age, which is normally accepted to have begun after the French Revolution, systematic research in science has enabled development of new technology and innovation both in military and civilian use. These have had effects both on the society and the nature of warfare. European nations, besides waging wars amongst themselves, used their superior technology to subjugate and colonise other nations. If we reflect on the history of the Indian subcontinent, we would observe that, since the days of invasion by Babar, foreigners have exploited their superior technology and at times, superior strategy and tactics to subjugate India. The present age, which is being referred to as post-modern age or knowledge age, is unfolding an unprecedented revolution in technologies. These technologies have not only touched myriad

Captain Rakesh Vadhyar is from the 1 Sikh Light Infantry. This essay was awarded the first prize in Group B of the USI Gold Medal Essay Competition for the year 2002.

Journal of the United Service Institution of India, Vol. CXXXIII, No. 552, April-June 2003.

activities in the civil field but have also initiated a revolution in military affairs.

Aim

The aim of this paper is to analyse the impact of advances in technology on the conduct of future warfare and how would the military leadership of 21st century face this challenge.

Preview

This paper is subdivided in the following parts :-

- (a) Part I – Changes in technology.
- (b) Part II – Challenges to military leadership.
- (c) Part III – Recommendations.

CHANGES IN TECHNOLOGY

The Gulf War is widely accepted as a transitional point which contained elements of the past i.e. industrial age warfare or Second Wave form of warfare which stressed on mass destruction (e.g. fleets of US aircraft carpet-bombed Iraqis in their bunkers and villages, everything was destroyed) and elements of new kind of war. This new war was fought with precision weapons with minimal collateral damage and with vastly improved means of real-time information, surveillance and target acquisition. It was realised that destruction of the enemy's means of command and control should be the prime canon of military doctrine. Thus, this kind of warfare, when fully developed would be knowledge based information age warfare characterised by manoeuvre rather than attrition warfare. This was described as warfare of the post-industrial age or post-modern age or the Third Wave form as termed by Toffler.

During the Gulf War, the use of links between scout and attack helicopters between Joint Surveillance and Target Attack Radar System (JSTARS) and weapons platforms, between forward observers and indirect fire system produced a quantum leap in systems integration. The future battlefield will depend largely on digital data, voice and video communication and to adapt this technology

for effective organisational use will remain a challenge for the military leaders in the future.

The Gulf War demonstrated a number of high-tech weapon systems, surveillance and target acquisition and command and control systems. Historically, man has always attempted to extend the range and lethality of his weapons. In the post-modern age, technology breakthroughs are being achieved with increasing frequency and rapidity. The impact of advance in technology on the conduct of warfare can be characterised into a number of dominant trends, namely, quest for extension of range of weapons, volume and accuracy of fire, system integration, concentration of maximum fire power in smaller units and increasing transparency in the battlefield.

Extension of Range

As the range of weapons extended and their lethality improved, individuals and units became more dispersed. The introduction of rifling in the 19th century extended the range and accuracy of individual weapons and artillery guns. This development forced individuals to go to the ground and disperse. Increased lethality and dispersion had direct effects on organisation, tactics, doctrine, equipment, force mix and methods of command and control. These changes, in turn had effects on training soldiers and leaders. There has been trend of an ever expanding battlefield; the battlefield has been emptying. In 1815, a division occupied about 5 square kilometres today it may take up the space of 80 by 80 kilometers or even more. By 2015, it may require an area of over 180 by 180 kilometers.

Earlier, the lack of accuracy of various weapon systems was sought to be compensated by heavy volume of fire. The development of guided weapons added a new dimension to the battlefield. The purpose of guided weapons was to economise on the size of forces by substituting accuracy for saturation, and also to provide a method for combating targets (such as supersonic aircraft) that were too fast and manoeuvrable. Induction of various kinds of missiles, laser-aimed weapons, laser target designators that guide artillery rounds and development of smart and "brilliant"

munitions confirms the trend towards precision fire. Whereas 300 conventional artillery rounds were required to achieve the desired effect at the target end, the same effect could be achieved by 30 rounds of improved conventional munitions and two to three rounds of Precision Guided Munitions (PGMs). Thus, an increased inventory of the PGMs would reduce tremendously the logistics infrastructure required for offensive operations. The technological developments in the field of volume and precision fire would have a direct bearing on organisations, tactics, equipment, planning factors and balance between combat elements and support services.

System Integration

Advances in communications technology, computers, information systems, surveillance and target acquisition system have given rise to improved means of command and control to a commander. Systems integration engenders force multiplication and gives a high level of precision to the overall force, not just to individual or massed fires. Modern integrative technology started with the telegraph and railroad, these two systems when joined, revolutionised warfare. The railway revolutionised the mobilisation and transportation of armies, but without the telegraph, a command system, which could use these forces intelligently, would not have been forthcoming. Introduction of radio and aviation expanded the scope of integrative technology. Efforts have always been directed towards obtaining a perfect real-time information system on which to base decisions and give directions. How-so-ever, a perfect command, control and information system is, the fog of war and uncertainties will continue. Developing subordinate commanders who are able to take on the spot decisions within the intent of the higher commander that is, decentralisation and not centralisation will remain vital in the future battlefield milieu. It remains to be seen how the higher echelons in the military will cope with this as it encompasses a planned and well designed system to be in place, requiring exceptionally high level of training and higher degree of mental mobility and superior skills in junior level commanders.

With the trends in compressing greater fire power, a well integrated smaller size force or unit could achieve greater and

decisive effects. Increased lethality and accuracy, mobility and extended ranges of weapon system give small forces a lethal and forceful punch. The second way that smaller units can create decisive effects is in organisational mixing of arms within a formation. Manoeuvre is the third way that smaller units can create decisive effects due to increased mobility e.g. with tanks, Infantry Combat Vehicles (ICVs), aerial platforms and self-propelled artillery. At each step, improved manoeuvre capability contributes to the commander's capability to move over increasingly dispersed area and converge quickly at the decisive point, thus concentrating the effects of both fire and manoeuvre. The next logical step of integration would be when land combat is waged by formations consisting of combined arms, air and ground based units. This will be reinforced by the use of integrative technology. Further evolution of combined arms will be the joint arms concept with a smaller unit, or, in other words, a composite unit.

Transparency

For a long time, detectability in the battlefield was limited to line of sight, scouts, spies and cavalry. It progressed, thereafter, to field glasses and balloons. In the beginning of the 19th century, battlefield information was passed on telephones and with the invention of the radio it could be transmitted almost instantaneously. Radar and various kind of electronic means of intelligence and deception were developed and they continued to be evolved after World War II. In the 1950s, transistor based machines began replacing their vacuum-tube predecessors. During the 1970s, these were in turn replaced by models based on integrated circuits, which kept getting miniaturised in successive evolutionary stages. In the late 1960s, computers, based on electronic chips, were provided with direct links, either through line or radio, to a variety of electronic, optical and acoustic sensors such as cameras, television, radar, infra-red and in the case of the Navy, linkage to sonar. The purpose of these sensors was to provide up-to-date intelligence by picking up the "signature" left by the adversary's operations. Computers could not only store vast amount of data, they could also be utilised to process the data based on pre-determined criteria.

The purpose of all these endeavours was to improve the ability to obtain a real-time picture of the battlefield. The Gulf War demonstrated many new technologies in this field. The ongoing revolution in military affairs has three fundamental characteristics. The first one is advances in surveillance and target acquisition technologies, satellites, unmanned aerial vehicles and various kinds of radars and sensors that have made the battlefield transparent. The second characteristic is advances in the processing of intelligence using advance communication and computing systems. The third is acting on intelligence, for instance, by using long range precision strikes (as demonstrated by cruise missile strikes against pinpoint targets in Afghanistan by the US).

Advanced technological and human intelligence systems will continue to expand the commander's detection range, improve the quality of information and disseminate the data to required levels via near real-time digital transfer. The battlefield, therefore, is becoming more transparent while attempting to make it more opaque for the adversary.

Information Technologies and Information Warfare

Just as the Industrial Age led to concepts of mechanised warfare and mass destruction of the enemy's war-making resources, the information era is leading us to concepts of domination of "information systems" to ensure attainment of military objectives. As Alvin Toffler says, "Information technology is the great equaliser, you don't have to be big and rich to apply the kind of judo you need in information warfare. That's why poor countries are going to go for this faster than technologically advanced countries." The population of electronic devices on the battlefield is increasing at an exponential rate, signalling the growing primacy of the electro-magnetic spectrum. A number of technologies are being fused together to bring the cutting tools of information warfare. It relies increasingly on artificial intelligence, knowledge embedded in weapons and surveillance technologies, to enhance combat effectiveness. From satellites to submarines, modern weapons are studded with information rich electronic components. Countries are more likely to spend their defence budgets on information dominance platforms

like Airborne Warning and Control Systems, JSTARS and satellites. Weapons in the information warfare's repertoire can have very significant consequences, without the attendant physical destruction. In addition, tools of information warfare can inflict unacceptable harm to civil and military information system of the adversary. The entire concept of information warfare is based on the lethality of the digitised battlefield. The most likely victor of information warfare would be the side, which can go through the cycle of "observation, orientation, decision and action" faster.

The prime canon of military doctrine in knowledge based information warfare would be the gaining of electro-magnetic superiority with a view to neutralise the adversary's command, control, communication, computer, surveillance, intelligence and information acquisition systems. In other words, in information warfare, a deliberate attempt is made to gain access to temper with, and exploit information systems of the adversary to own advantages, at the same time preventing him from doing the same to own system. The aim of future will gravitate more towards psychological paralysis and not destruction of forces or capture of territory. Apart from seeking nuclear and conventional deterrence, the armed forces would strive to achieve "information deterrence" against likely or visualised adversaries.

Information warfare, as a constituent of combat power can also be exploited during peacetime, along the entire spectrum of conflict. It exploits the vast potential of technology, to derive benefits in excess of the sum total of individual components. The information technology and information warfare environment signifies a synthesis of technology and human intelligence with force capability. Information warfare contributes significantly in the areas of intelligence, surprise and deception, decision making and adversary's psychological degradation. This gives a tremendous force multiplication effect, though, it may not be possible to quantify this effect in absolute terms. It would have an impact on force structures, force mixes, doctrines, changes in style of command, staffing patterns, quality of human resources and other planning factors.

Bio Technology

Genetic studies are being done to learn the information-storing secrets of DNA, which can compress enormous amounts of data into microscopic spaces. Techniques from DNA studies are already being applied to computer microchips to create information systems much smaller, faster, and more capable than existing ones. These promising areas are being developed to produce very small systems, bimolecular electronic, new technologies for military logistics and cyber spaces security and safety. The micro and nano-technologies are being used to develop miniature flying and/or crawling systems capable of performing a wide variety of battlefield sensor missions. Molecular biology and bio-technology is being used to develop new molecular electronic materials, components and computational architecture, bio-molecular computers, neuro-computers and bio-sensors.

A fusion of modern micro-electronic and information technologies would help to evolve a new advanced military logistics system that would be responsive to forward troops needs, reduce requirements of inventories and eliminate redundant processors. Smart chips, bar codes, smart labelling of packages and monitoring and control would radically change the way logistics function on the battlefield.

APPROACH TO MEET THE CHALLENGES BY MILITARY LEADERS

The necessity of a modern army will grow as an economically and technologically stronger India gets ready to play its part in the coming 'Age of Asia'. In the game of power play, a nation's capability in not only developing and evolving new technology, but also to adapt it for military use through innovations and evolve a foolproof system with redundancy for its security. The need of the hour is to develop core technologies and adapting them with effective policies. India's readiness, and its army's preparedness to respond decisively, will generate the right impulses for others to take a note of. Past trends indicate that technological breakthroughs will continue to be achieved with increasing regularity and they would continue to bestow military advantage on the first nation to develop and use them. The challenges then to the military leadership in the future will

be to evolve new doctrines, training methods, recruitment policies and counter measures for an enemy's superior military technology.

Doctrinal Changes

Full automated warfare is likely to lead to far reaching changes in the military doctrine. The direction of doctrine could lead to offensive that would involve attacking of enemy forces, particularly reinforcements, at long distances. With technology defining the rules of war, more emphasis will be on putting into place a weapon system with an edge over that of the adversary's. The think tank at the top of the hierarchy would require to change the thought process in pace with developments in military's fighting capabilities at strategic, operational and tactical levels to suit the new dimensions of war.

Recruitment of Technology Savvy Personnel

Since modern automated weapons are smart, future soldiers would have to be even smarter with high intellectual calibre. They would be expected to deal with diverse situations, tolerate ambiguity, take initiative and ask questions. The combat arms soldier would have to be skilled in trigonometry and navigation to direct fire and use designating equipment as well. For the combat soldier, future wars would be more than just pulling the trigger. This would require a marked change in the recruitment policy with emphasis on smart and technology savvy personnel rather than physical fitness alone.

Training of Soldiers in Operating High Tech Equipment

Technology demands a high degree of involvement and intelligence level of the troops. The changed nature of war, places an increasing value on education and expertise of the soldier. The soldiers will have to be provided with a high standard of training so as to handle the high tech equipment to produce the desired results in war.

Miniaturisation

The days of mass attacks will soon be history. Today one F-17 flying a single sortie and dropping a single bomb can do what took 95 sorties and 190 bombs during the Vietnam war. Earlier, tanks had to stop, aim and then fire. Today they can fire while on the move

even at night with lethal accuracy. De-massified destruction with surgical precision would reduce collateral damage without compromising on the mission aims.

Psychological Impact on Soldiers

Soldiers of the future will have to face greater psychological pressure. Intangibles will acquire great importance in a scenario where one mistake by an operator can have devastating results. Both in defensive and offensive roles, soldiers will have to withstand these intellectual rigours.

Change in Organisation Structure

Due to the nature of the future wars, despite the capability of technology to provide near real time communications, decisions would have to be taken at the field level. The central headquarters would have to support the field commanders and not manage them. Decision authority would have to be pushed down to the lowest level possible.

Nature of Battlefield

The numbers on any side would be no indication of its capabilities or strength. What would become more important would be the intangibles like the total computing power or communication capabilities of each nation and their capability to withstand hostile acts, both lethal and non-lethal. The battlefield comprising dug in positions would be replaced by a totally fluid front extending in all dimensions of distance, altitude and time. With an aim to wrest the initiative from the enemy, armies would like to strike deep where the enemy has critical vulnerabilities, avoiding frontal attack. The likely targets would be enemy's communication centres, administrative echelons, energy sources and command facilities.

Countering Enemy's Enhanced Military Technology

History is dotted with examples which indicate that initial revolutionary advantages achieved on the battlefield turned out to be ephemeral once ways and means were found and developed to counter the effect of new technologies or weapon systems. As we enter the information age, there is no doubt that information warfare

technologies, precision fire technologies and fusion of a host of other technologies are going to transform the way we conduct warfare. Yet our intellectual thought processes need to be tempered by the limitations and possible vulnerabilities of these technologies. During a war gaming of the American "Army After Next" project in 1997, a laser attack on the US space-based satellite reconnaissance, Global Positioning System and communication capabilities was followed closely by a nuclear electro-magnetic pulse burst in space. The combined effects of these two actions of the adversary reduced by 50 per cent the military information structure on which most of the new American weapon systems are dependent.

RECOMMENDATIONS

The maxim that "It is not the machine but the man behind the machine which matter in the war" has come up for debate due to the technological advancement and their miraculous impact on the warfare. The innovative technologies even pose challenges to the very definition of the battle. New concepts such as degradation of the depth targets, attrition, artillery raids and psychological operations (psy ops) are making the battle-field managers and the leaders to change their thinking. Despite the fact that the 'neotech' will create havoc in the enemy camp, the military thinkers and the middle level and junior leaders need to train themselves to manage these technologies to yield fruitful results with minimum or no damage and casualties to own forces.

Some of the recommendations for management of technological resources for achieving astounding results are as follows:-

- (a) Evolve a coherent national policy, keeping in view our long time security concerns.
- (b) Identify threats, possible military objectives, range of response options and evolve a grand strategy.
- (c) Foresee and identify the most purposeful application of military might in consonance with other compliments of national power.

- (d) Only well deliberated visions can help in acquiring the desired capabilities to effectively counter the visualised threats and analyse the solutions.
- (e) Middle level and junior commanders to carry out the tasks of the direct combat role, the administrative and organisational functions of military manager and the desired skills of a military technologist.
- (f) The leaders at unit level should possess high degree of mental mobility, improved decision making, better communication skills and greater ability to withstand combat stress.

Conclusion

Though the conduct of warfare is changing, it still has some constant determinants. The root cause of war are people, whether political leaders, nation states or non-state actors; they will continue to be involved in wars or conflict for fear, revenge, hatred, greed or other human emotions. It will still be a contest of will accompanied by death and destruction. Ambiguity, uncertainty and the fog of war, would continue to be its features. The artistic side of war will continue with creativity, intuition, leadership, motivation and decision making under conditions of limited information.

Technology has changed the traditional thought processes on military effectiveness. Increasingly, modern armed forces are endeavouring to obtain superiority over the enemy by qualitative means by deploying advanced technologies. The shift from "mass" and mobility to non-traditional methods of enhancing relative combat effectiveness is being achieved by integrating a number of evolving technologies. Developments in imaging, remote sensing, night vision, sensors, PGMs stealth technology and above all digital communications and computer networks are compelling us to adopt new war fighting techniques. The current "silent" revolution in military affairs, however, has not been accompanied by an examination of its impact on our force structures, organisational aspects, doctrine, quality of leadership, human resource development and logistics. This will remain a big challenge in the years to come for the military leadership especially at the highest level. As Van Creveld says in

his book *Technology and War*, "The greatest victories that have been won in war do not depend upon a simple superiority of technology, but rather on a meshing of one side's advantages with the precepts to meet the challenges of warfare in the next century". Although technology is making great advances, human being remain the most effective systems for determining relevance and fusing information. Technology will aid us in many ways, especially in helping offset reductions in size, but technology will not solve all the problems associated with war. Conduct of war requires both science and art. Good leadership, quality soldiers, cohesive units and streamlined organisation are absolutely necessary.

ARTICLES FOR THE USI JOURNAL

1. Members are welcome to forward original articles pertaining to national security and defence matters for publication in the USI Journal. Articles should preferably be around 2,500 words. These should be forwarded in double space on A-4 size paper, along with a floppy disk (1.44 MB diskette), IBM Compatible, on MS Word for Windows 97. The articles should be sent to the Editor, United Service Institution of India, Rao Tula Ram Marg, Post Bag No. 8, Vasant Vihar PO, New Delhi-110057. Alternately, articles may be sent through e-mail on dirusi@nde.vsnl.net.in. The Editor reserves the right to make alterations. Articles should not have been offered for publication to other journals or media.
2. The full name and address of the author along with a brief Curriculum Vitae should be given. Serving officers should enclose no-objection certificate signed by their immediate superior for publication of their articles.
3. The author will receive a copy of the issue of the Journal in which his article appears along with three offprints. A suitable honorarium will also be paid after the article is published.

Indian Air Force and Technology

Air Vice Marshal SC Rastogi, AVSM, VSM (Retd)

Introduction

Beginning with the Greek mythology when Icarus flew with wax wings which let him down after he came too close to the sun, the adventurous spirit of mankind to defy the laws of nature found its finest expression with the first heavier-than-air flying machine in 1903. During the intervening long years between these two events, man continued to struggle and experiment with technologies to outsmart the Nature, passing through the evolutionary stages of dirigibles and balloons. All through this process, technology continued to provide the sustenance and impetus for the evolution of air power as we see it today.

Modern warfare has led to continuous demand by the armed forces to upgrade, modernise and replace the hardware. Amongst the myriad military disciplines and activities, none is as dependent on continuous infusion of new technologies for its survival as the Air Force. The very foundation of an Air Force rests on the bedrock of technology and any temptation to overlook this fact could lead to possible catastrophic results. With air threat being a dynamic entity, the rate of obsolescence and consequently shorter life cycles of hardware are the two main aspects peculiar to a modern Air Force as compared to the Army and the Navy. It also makes the Air Force the most capital intensive and technologically advanced Service. It is only because of the high technological plateau at which the modern air power operates that the recent conflicts in the Gulf, Kosovo and Afghanistan were exclusively won from the medium of air.

Major Technology Regimes

The major regimes of direct interest to the Air Force are materials, propulsion, weapons, navigation, communication, electro-

Air Vice Marshal SC Rastogi, AVSM, VSM is a former Assistant Chief of the Air Staff (Plans) and ACAS (Inspection).

Journal of the United Service Institution of India, Vol. CXXXIII, No. 552, April-June 2003.

opticals and avionics. While technological advances in materials and weapons have indeed been significant, a quantum improvement in the effectiveness of the air power as a whole has been brought about by the phenomenal growth in electronics. Super miniaturisation of electronic components and advanced system architecture have made it possible to incorporate formidable data acquisition, fusion and real time processing capability even in small combat aircraft, thus converting a modest platform into a potent weapon system. Besides fusing the data output of multiple onboard sensors for better situational awareness and quick decision making, electronics have helped in optimising other technological disciplines as well. For example, Fly-By-Wire (FBW) controls have allowed the designers to exploit unstable aerodynamic configurations leading to significant reduction in weight and enhanced performance.

Two other major areas of technology, which are somewhat different from others, are the Stealth and Electronic Warfare (EW). This grouping has been prompted by the fact that unlike technical disciplines, Stealth and EW technologies do not have any direct application in non-military systems. Those who followed the Gulf and Kosovo wars with more than a passing interest must already be aware of the prominent role played by these two technologies. Both are natural outcome of a continuous tussle between the offensive and defensive systems. World War II witnessed the advent of radar as the key sensor for threat detection and the Stealth technology is intended to degrade, if not nullify, its performance. EW involves eavesdropping and interfering in the electro-magnetic spectrum, which contains all communications and radar transmissions.

Implications of Advanced Technology

While advanced technologies are the trump card of an Air Force, as a corollary, their absence automatically becomes the Achilles' heel. Even though the sharp end of military aviation is so intimately dependent on fresh technological inputs, their acquisition also entails a number of problems, as enumerated below :-

- (a) Since the frontier technologies are seldom available off-

the-shelf, their acquisition costs are invariably high due to high component of amortisation of investments. Research and Development (R&D) costs of developing major weapon systems such as aircraft, helicopters and air defence systems run into billions of dollars.

(b) Availability of foreign sourced technologies is not determined by affordability alone, but by extraneous political factors as well. Accessibility and affordability are crucial factors.

(c) Rapid advances in aviation technologies result in higher rate of obsolescence which places the replacement cycles under further stress.

(d) For executing the transfer of technology (ToT) projects, manufacturing processes and infrastructure have to be upgraded and personnel re-trained, further adding to the cost of ownership.

The Indian Air Force (IAF) is currently placed in a paradoxical situation vis-à-vis the urgent need to upgrade in some of the vital areas such as electro-optical sensors, smart munitions, navigation systems and electronic warfare. Despite impressive budgetary allocation all through the Ninth plan, its modernisation plans have continued to languish due to allocations being surrendered year after year. Typical example is of the Advanced Jet Trainer (AJT) which has failed to fructify since 1987. As a consequence of the widening gap between the present stage of the IAF and where it should have been to meet the security challenges against the nuclear backdrop, there is a compelling need to take a fresh look at our technological needs and re-evaluate the possible contribution by the indigenous R&D towards fulfillment of our objectives.

Technological Spin-offs

The advanced military technologies indeed present a very daunting picture of the investments and risks involved. However, investments of such magnitude, besides being justified on security

considerations, produce beneficial spin-offs for the non-military sectors as well. A synergy between the military and commercial sectors has been steadily emerging. While most of the military specific technologies have found multiple applications in non-military sectors, military systems also incorporate many commercial grade technologies and components on cost considerations. Technologies amenable to cross application between the military and commercial sectors, commonly referred to as 'dual use technologies', are most evident in electronics, chemicals and avionics industries. Some of the military technologies which have now found wide application in non-military systems are as follows :-

(a) Almost all the advances and innovations in the aviation field in general find a ready and immediate application in civil aviation. A clear example of such applications are the modern airliners equipped with glass cockpits and FBW control systems. Inertial navigation system originally developed for missile guidance and fighter aircraft now finds universal application. Global Positioning System (GPS) is another example which has received International Civil Aviation Organisation (ICAO) endorsement.

(b) Satellite technology has revolutionised the communications and entertainment sectors.

(c) Real time data processing and management systems are used in power generation and continuous process plants.

(d) Surveillance and recce systems are used for survey, remote sensing of natural resources and monitoring agricultural output and pollution level.

Indigenous Technology Base

While the ideal solution for meeting the needs of the IAF lies in indigenous production, in-country capability to design and produce major systems as turn-key projects has remained extremely modest for a variety of reasons. Having been "spoon fed" on the licence production culture, the industry has little dynamism or drive to

launch indigenous programmes on its own. In 1995, only 30 per cent of our total defence equipment needs were met through indigenous production and the situation has not improved much since then. The intention is not to analyse the reason for this malady but to suggest an approach to overcome the present difficult situation. The following steps, if undertaken with a sense of commitment, would help in reducing the IAF's dependence on foreign sources :-

(a) Clearly identify the technology regimes that the IAF requires in the next three decades to achieve clearly articulated operational objectives. This is easier said than done. In a fast paced scenario of rapid developments, selection of optimum technology would require a scientific assessment and thorough groundwork. To start with, a database of technologies and capabilities that already exist in various sectors in the country would be essential. It is surprising but true that significant expertise in diverse technologies already exists within our industrial sector and Public Sector Undertakings (PSUs) and R&D, of which the end user is neither aware, nor has the means to find out.

(b) Resist the temptation to re-invent the wheel under the guise of competence building or to demonstrate technological independence unless either the costs of licence rights prove to be prohibitive or the technology is declared non-exportable.

(c) To wean away the PSUs from the licence production culture, replace the antiquated ToT concept with co-production and joint marketing arrangements. This would result in management becoming more dynamic besides compelling the PSUs to imbibe a new work culture to meet their co-production obligations. More importantly, it would establish mutual dependence with the foreign vendor for better product support.

(d) The dual technologies whether foreign sourced or locally developed by Defence R&D, be transferred to non-military sector for wider exploitation.

- (e) Involve the private sector in defence production in a phased manner even if it entails subsidies for supporting limited production runs. This alone would ensure that the manufacturing infrastructure develops in step with the technologies and competitiveness introduced within the indigenous industry.
- (f) A dynamic interaction between the policy makers, private sector, scientists, economists, military and political scientists be initiated and sustained to continuously analyse and update technology policies.

Restrictions on Technology Transfer

Availability of foreign technologies is governed by two crucial factors of affordability and exportability. While affordability is a simple issue of dollars and pounds, exportability is a far more complex subject involving geopolitical and strategic factors, political offsets and other compulsions influencing the exporting and recipient nations. Also, with mega-mergers and cross-holdings, the vendor base has become smaller and options limited. In such a scenario, political initiatives to forge stronger strategic alliances with selected countries have to be taken to accommodate national interests in the new global order.

Advanced nations have evolved a number of restrictive alliances to control the proliferation of technologies. The existing examples of restrictive alliances are the nuclear Non-Proliferation Treaty (NPT), Missile Technology Control Regime (MTCR) and the Intellectual Property Rights Act for preventing the proliferation of military critical and dual use technologies. In the coming decades, greater restrictions on transfer of even the commercial technologies, which are perceived to be dual purpose may be expected. The world today clearly stands divided between the technology haves and have-nots and the only way to upgrade our status is through determined indigenisation of technologies.

Conclusion

The dependence of the Air Force on continuous infusion of

modern technologies is too strong to be overlooked. The importance of dual use technologies and the need for a concerted thrust towards their indigenisation through dynamic interaction between the private sector and Defence R&D is the only way out. At the same time, if indigenisation entails slippages and undue delays, rapid onset of obsolescence would make the technologies operationally irrelevant in the military context and, thus, a liability rather than an asset. Consequently, the Government needs to strike an intelligent balance between the indigenous development and imports and not assume a rigid posture in favour of indigenous development alone.

USI RESEARCH PROJECTS FOR THE YEAR 2003-2004

- | | |
|---|---|
| (a) Fd Mshl KM Cariappa Chair | Special Forces Employment
in the Indian Context :
An Appraisal
Col Deepak Sinha. |
| (b) Air Mshl Subroto Mukherjee
Chair | The Influence of Aerospace
Power on the Nature of
Warfare in the 21 st Century
Gp Capt M Matheswaran, VM. |
| (c) Prof D S Kothari DRDO Chair | Strategy for Consequence
Management of WMD
Terrorism
Col M S Patial. |
| (d) Ministry of External Affairs
Chair | Changing Global Security :
Its Implications for UN
Peacekeeping Operations
Col A K Bardalai. |

Disquiet on the Western Front

Shri EN Rammohan, IPS (Retd)

Rann of Kutch Sector

The western border with Pakistan starts at the mouth of the Sir Creek. For the first 104 kilometres the border is disputed. The border runs along the Sir Creek for the first 64 kilometres. Pakistan claims that the border should be along the left bank of the Creek. India claims that it should be along the middle of the navigable channel. From the 64th kilometre, the International Border (IB) runs east in a straight line for 40 kilometres, over mud flats, interspersed with three channels, Pabewari, Kothawari, and Vianwari creeks, which flow in from Pakistan. This stretch of 40 kilometres had 67 boundary pillars called G pillars of 1924 vintage, of which only 38 pillars exist. These pillars were erected by the two princely states of Sind and Kutch, who controlled the border between their two states. Pakistan does not recognise this demarcation. The line of the G pillars joins boundary pillar (BP) No 1175 called the western terminus. From here the IB turns north till BP No 1153, from where it moves in a generally easterly direction through the northern edge of the Great Rann of Kutch.

The whole of the Creek and the Rann constitute a peculiar geological phenomenon. The land of this area is below sea level. The Creek is different in that minor distributaries of the Indus flow through its area. Since it is below sea level, the tides flowing in from the Arabian Sea, inundate its extensive mud flats and mangroves. The channels and creeks rise 15 to 20 feet during high tide. The smaller creeks are navigable only during high tides, while the larger creeks become navigable during low tides only along certain channels. The personnel of the Water Wing of the Border Security Force who navigate the Creek Area, have to be constantly vigilant as the Creek area has not been hydrographically

Shri E N Rammohan retired as the Director General, Border Security Force. He had a tenure as Advisor to Governor of Manipur.

Journal of the United Service Institution of India, Vol. CXXXIII, No. 552, April-June 2003.

surveyed except for Kori creek. The main creeks in this area are Kori, Padala, Vianwari, Pabewari, Pir Sanai, and Sir creek. Of these, Kori creek commences from the western edge of the Rann. The upper reaches of this creek, dry up with the Rann, during November to May. Both Pabewari and Vianwari creeks, flow in from Pakistan, and get some infusion of fresh water. Pir Sanai comes out from Sir creek, joins Pabewari, and flows into the Arabian Sea. There are a number of small channels connecting the main creeks. Of these Lakhpatwari creek is strategic, in that it connects Pir Sanai, with Kori creek parallel to the sea. It can thus be used to slip into the mouth of the Pir Sanai, and then to sneak into Kori creek. This channel cannot be navigated during low tide. The other creek, which has strategic value is known as *Harami* nullah. It commences in the western edge of the Great Rann in India and flows into Vianwari creek inside Pakistan. This nullah is used regularly by Pakistani fishermen, and also by infiltrators. In November 2000, a reconnaissance helicopter of the Indian Air Force with BSF officers sighted a boat in this nullah, and flew low to investigate, and crashed in about two to three feet of water in the Rann. Presently the whole creek area is policed by medium craft of the Water Wing of the BSF. These craft can take just less than a platoon and sometimes anchor in the smaller channels overnight. It is not possible to stay longer, as there is no fresh water. BSF plans to induct larger craft, which can stock a week's ration and water. These vessels will act as floating Border Out Posts (BOPs) with four lighter boats that can patrol by turns in a wide radius round the mother craft. A number of choke points, junctions of nullahs and channels, have been identified, which if manned by floating BOPs, would make it difficult for any boat to slip into Kori creek and thus to the mainland.

The Great Rann extends from a north south line linking BP No 1175 to the mainland, and to BP No 1153, for about 400 kilometres. For the first 100 kilometres from this line to the east, the Rann is under two to three feet of water throughout the year. The zero line of the IB from BP No 1175 to 1153 is thus difficult to police. The area is too shallow for boats and too deep for vehicles or camels. This probably prompted Krishna Menon to remark that the Rann is too deep for the Army and too shallow for the Navy.

Every year when the southwest monsoon hits the west coast of India, the Great Rann gets flooded. The water level at high tide varies from three to four feet and at low tide from one to two feet. In the great expanse of the Rann are a number of small raised mounds called *bets*. BSF has established BOPs on a number of these *bets*. During the wet season the *bets* become islands that are cut off from the mainland for six months. Ration and water is stocked on these *bets* for this period. Centuries of flooding and evaporation, has rendered the Rann as one of the saltiest places on the Earth. In the dry season, the Rann is a swirl of sand storms and mirages. There is not a blade of grass or any landmark in the Rann. Between the posts on the *bets*, lines of poles carrying communication wires are fixed. When going from post to post, if one wanders away from this lifeline, it is almost certain death. The Great Rann extends north south up to 80 kilometres at its farthest point. The Rann and the creek are the two areas on the IB that are not policed in the conventional way with a string of BOPs located parallel and close to the border. All the BOPs except 12 are located well behind the border. 12 BOPs are located deep in the Rann on *bets*. The forward most post is Sardar. This was overrun by Pakistan in 1965, when they invaded through this axis. Since the BOPs are not strung in a line, close to the border, it is not possible to lay a chain of ambushes linking BOPs. The majority of the BOPs are located on the mainland overlooking the Rann. In 1996 a plan was submitted to the Government to have a border road constructed on a bund to be laid parallel and about 100 to 200 yards behind the zero line. The plan was to construct BOPs on this bund at intervals of five kilometres. It was also planned to construct a few lateral roads to the mainland, so that the posts on the bund could be accessed from different points on the mainland. If this stretch could be fenced and lighted, it would virtually seal this axis. Pakistan has taken full advantage of the present lacunae and penetrated our defences several times, sending in trained terrorists with AK rifles and explosives. The population on the mainland is identical with the people on the Pakistan side. Till the Khalistan terrorist problem, marriages used to take place across these borders. After the insurgency started in Jammu and Kashmir in 1989, the BSF had to take steps to stop routine movements. However, smugglers manage to slip in a stray consignment of

heroin and the Inter Services Intelligence (ISI) also manage to penetrate our defences, once in a way. Besides the harsh terrain, the BSF is deficient of two to three battallions in each sector. The gaps between BOPs in the Rann are large and Pakistan is able to capitalise on this successfully. One of the weak points on this border is the area across the hill feature called Kaladunger, which is on a promontory of the mainland into the Rann. The border from the base of this hill is just 20 kilometers. The hill feature is visible from across the border and this is a favourite route both for smugglers and saboteurs.

Barmer Sector

Barmer sector is 243 kilometres of semi-desert. The terrain is harsh, with scrub covering the arid undulating country. There is acute shortage of water. Here again the border troops are fully stretched. The population is mixed and poor. Smuggling is an automatic alternate choice. Barmer is a weak link on the western border. Despite the fencing and lighting, consignments of heroin are smuggled from time to time. The normal practice is for smugglers to telephonically pass on the rendezvous on the border to counterparts across. Village scouts watch the deployment of ambush parties and isolated spots are identified. Parties from across come up to the fence and throw the contraband packets over the fence and parties waiting for it collect them. The human factor cannot be discounted. At times an officer or Junior Commissioned Officer (JCO) is purchased, and the sector of his deployment, becomes a regular route. Senior formations have to continually monitor this by keeping in touch with heads of other agencies operating on the border - the Directorate of Revenue Intelligence, the Narcotics Bureau, the Central Bureau of Investigation and the Customs. Much more attention is to be paid to intelligence operations to penetrate the smuggling network in this sector. Better coordination between the intelligence units operating on the border is required.

Jaisalmer Sector

Harsh desert conditions prevail as we cross into Jaisalmer Sector. This is the biggest Sector of the BSF in terms of deployment. Till a few years back many of the BOPs were situated

10 to 20 kilometres behind the zero line. From 1996 to 1998 all the BOPs that were behind were pushed forward. It is to the credit of the Central Public Works Department (CPWD) that within two to three years, they constructed buildings for all the newly pushed forward posts. Today though there are still posts that can only be reached by camel, at least one barrack for the men exists in all these remote posts. Jaisalmer sector now has linked BOPs within 100 to 200 yards from the border throughout its length. The inter BOP distance is four to five kilometres. The Shahgargh bulge is one of the most hostile environments anywhere in the world. The winds that blow through this area shift the sand dunes by up to 30 feet in a day. Fencing was constructed on an experimental basis. Shifting sand dunes would bury a stretch of fencing, on one day and erode it the next day. A stretch of several kilometres has been left unfenced. The desert is undulating in a series of low valleys and ridges, which are all east west. The low valleys have a fair number of trees, shrubs and grass. In many of these nullahs, wells produce sweet water. Since the ridges and valleys are east west, and good camouflage is available, smugglers and saboteurs try to break through from time to time. The whole of the Shahgargh bulge is very sparsely populated. The villagers are nomadic Muslims and go from water hole to water hole with their herds of cattle and goats. Smuggling is an ancient trade in these parts. Fencing has put a stop to this activity, however, old habits die hard, for the living is difficult, and the profits of heroin smuggling very high. The old guard of smugglers do try once in a way to outwit the night ambushes of the BSF. The human factor has to be constantly kept in mind by superior officers controlling this very harsh, but very beautiful and challenging sector. Beyond the Shahgargh bulge, the desert is more stable, and the fencing a real asset to policing the border. The CPWD have done an extraordinary job for the BSF and the nation.

Bikaner Sector

Desert conditions gradually give way to more level land as we enter Bikaner Sector. 332 kilometres long, the Sector is again short of two battalions. The inter BOP distance works out to five kilometres. The sector is fenced and lighted fully except for a small stretch where an irrigation canal flows close to the border. The

border belt, fed by this old irrigation canal, is cultivated up to the zero line. The presence of habitation right up to the border facilitates smuggling of heroin. Here, it is the human factor that is to be rigorously watched. This canal was constructed by the Raja of the local princely state, virtually aligned parallel to the IB. It runs for a particular stretch less than 100 metres from the IB. This posed a problem when the fence was being constructed, as the ground rules required the fencing to be erected at a minimum distance of 100 to 150 yards from the zero line. This portion was, therefore, left out when the canal was constructed through the desert, the Raja asked the local people to come and settle along the canal. No one was willing to take up this pioneering job. Disgusted at the lack of enterprise of his subjects, the Raja invited farmers from the Punjab to his kingdom, and since the land was available at throwaway prices, there was a virtual flood of peasants from the north. Ganganagar today looks like a mini Punjab. The desert has been transformed, into a fertile plain on either side of this canal. This posed a problem for the BSF during the Khalistan movement. Cadres of the Sikh extremist groups began to use the Ganganagar border for exfiltration and infiltration. Smugglers use this border for smuggling heroin.

Punjab

There is very little to distinguish in the terrain as we cross into Punjab. 555 kilometres of this border was the richest land border for smuggling of gold before the restriction for importing gold was lifted. Then came the Khalistan movement, and the Punjab border became alive as cadres from different groups crossed over for shelter and training in Pakistan, returning with weapons and explosives. The Home Ministry decided to fence and light the border. The work was taken up on a war footing, and the task was completed in a year. The fence created a dramatic impact. Smuggling dropped by 90 per cent. Infiltration with arms and explosives was deterred. The BSF on the border became accountable. In fact with the fencing, the task of policing became more arduous. Probably because of the terrorist, violence in the state, and the border being used for exfiltration and infiltration, the BSF could get enough battalions sanctioned for Punjab. Each battalion covers 35 to 40 kilometres only, and the inter BOP distance varies between two and a half to three kilometres. Fencing and

lighting was one of the factors, which contributed to solving the Khalistan problem.

Travelling along the border in Punjab, one is struck by the lush cultivation, the prosperous villages close to the border, and one is tempted to ask, why do the local people still resort to smuggling heroin. The answer is not far to seek. The profits of smuggling heroin are fabulous, and the spirit of daring in the local community, gives the impetus. Greed has tripped the career of quite a few brave officers of the BSF. The human factor has to be continually monitored by the senior officers of the Force in this Sector. All the four sub sectors along this border are vulnerable. These are, where the Sutlej and the Ravi rivers criss cross the IB, leaving thin strips of land on either side which are difficult to police. Pakistan regularly uses these points to push in terrorists carrying pistols and explosives. Smugglers also use these vulnerable gaps. Twice in the last four years smugglers have unsuccessfully tried to dig tunnels under the fence to push heroin packets through. In both instances the detection was by chance. Patrols between the fence and the zero line detected the tunnel when it caved in on the scout of the patrol. In one case the tunnel was more than 50 yards long. The wasteland in the areas where the Sutlej and the Ravi criss cross along the IB has a heavy growth of tall grass called *sarkanda*. This gives good cover for any clandestine operation, like digging tunnels. The Pakistan ISI uses smugglers to carry explosives and pistols across into India to be handed over to subversive elements. As a reward, they allow them to carry a couple of kilos of heroin, overruling the officers of their Narcotics Bureau. There is a lot of resentment among the Narcotics Bureau officers against the officers of the ISI because of this practice.

Jammu and Kashmir

The Punjab border merges into the Jammu Frontier in Paharpur. BP No 1 starts at this point. The Pakistanis call the International Border in Jammu the working boundary. The IB in Jammu runs for 198 kilometres. The terrain varies from mini ravines at Paharpur to undulating ground till the left bank of the Chenab. A number of rivers and wide nullahs flow into Pakistan like Basantar, Niki Tawi and the Jammu Tawi. The banks of these rivers are extensively covered by tall *sarkanda*. With undulating ground, mini ravines,

and tall grass generally clothing the landscape, this sector is an infiltrators' playground. Pakistan has continually used this sector to push in insurgents carrying AK rifles, pistols and explosives. In fact the ISI has succeeded in infiltrating groups of even eight to ten insurgents like they do on the Line of Control (LoC). Once the groups cross the ditch cum bund of the Army, the national highway and the railway line, they head for Kathua and then onto Badarwah and Kishtwar. The BSF deployed on this Sector have only 30 kilometres of the border per battalion. Despite this and continual heavy deployment, Pakistan takes full advantage of the terrain and tries ceaselessly to infiltrate saboteurs. Attempts to fence this border did not succeed, because of firing on the CPWD workers. Ultimately, the work is being done by the BSF departmentally. It is necessary to deploy at least four more battalions to ensure that ambush parties cover ground effectively.

The ultimate answer to successful border guarding is to fix ground sensors along the border, installing radar, FLIR (forward looking infra red) or thermal imagers as an electronic curtain. Quick Reaction Teams (QRT) positioned tactically, linked to the control stations could immediately respond to any attempt to infiltrate by bringing down fire on the saboteurs as soon as they are detected. Israel's border with Lebanon is 139 kilometres long, and an electronic screen of ground sensor equipment covers it. Their fence is unlike ours, bang on the zero line. Consoles are located all along the border, and alert personnel are continually monitoring the screen. When any suspicious movement is seen, the QRT is informed and after locating the target, fire is brought down on it. The IB on the Jammu Sector is the most vulnerable of all our borders. In fact the ISI is trying very hard to convert this to an LOC. The ISI sends its saboteurs almost daily to try and break through the ambush parties. The ISI also resorts to a mean and inhuman technique to push their infiltrators through. Pakistan regularly deports its ethnic population of Bangladeshis and Rohingyas by pushing them into India along its western borders. They also use these hapless innocents as guinea pigs by sending them ahead of the main infiltrating group as scouts. At night BSF ambush parties cannot distinguish between Bangladeshis or Pakistanis and Pathans. They challenge, and open fire on the group killing the innocent Bangladeshis. It is only next morning that the BSF party understands

that they have not got the main party, but only innocent Bangladeshis, who have been forced to act as cannon fodder. There is very often heavy exchange of firing along this stretch of the border. In 1996 in one spell of firing, the Sotlej Rangers fired more than one lakh rounds on the Sapper Highway post of the BSF over a period of one week. It is urgently required to fit ground level electronic sensors on the 198 kilometres of this border. It is a costly proposition both for installation and for maintenance, but this should not be a consideration. The security implications are grave and this should override cost considerations.

References

1. Amalendu Guha, *Planter Raj to Swaraj*.
2. Sanjoy Hazarika, *Rites of Passage*.
3. K Prabhakara, *The Hindu*, 29 October 1991.
4. Irtiza N Ali with Saiful Huda, 'Life away from home', *The Dacca Courier*, 6 to 12 September 1991.
5. Sadiq Khan, 'The Question of Lebensraum', *Holiday*, 18 October 1991.

UNITED SERVICE INSTITUTION OF INDIA CENTRE FOR ARMED FORCES HISTORICAL RESEARCH (CAFHR) RESEARCH PROJECTS

A Centre for Armed Forces Historical Research has been established at the United Service Institution of India by the Council of the Institution in consultation with the three Service Headquarters, to study the history of the Indian Armed Forces with objectivity, and covering the strategic, tactical, logistic, organisational, socio-economic facets and their implementation. Two Chairs, namely Chhatrapati Shivaji and Maharana Pratap, have been established.

Scholars, both serving as well as retired, desirous of applying for a fellowship to carry out research in the history of the Indian Armed Forces may submit project proposals in quadruplicate either through Service Headquarters or directly to the USI by 31 December. Copies of the Rules and Regulations and Application Format may be obtained from the Secretary, CAFHR.

Each fellowship shall carry a contingency grant of Rs 12,000/- to be paid in four equal quarterly instalments. In addition an honorarium of Rs 72,000/- shall be paid as per the terms and conditions laid down in the Constitution of the CAFHR.

Ethno Nationalism in North Eastern India

Brigadier R S Grewal, VSM (Retd)

Introduction

Mention India, and it conjures up images of a country of continental dimensions, the largest democracy in the world, which is home to people of diverse cultural and ethnic backgrounds. At the time of independence there was British India plus 562 princely states under British Paramountcy. The founding fathers of the Indian Constitution had aimed to mould these into a secular and democratic state. They had sought to shape an overarching Indian identity in the face of staggering diversity and reality of pluralism. This was hoped to be achieved by guaranteeing fundamental rights, in some cases through specific provisions for the protection of minorities. Similarly, special legislative and administrative safeguards were provided in the Constitution to protect the cultural and social heritage of the people of the North East. But the creation of states on linguistic basis gave a fillip to regionalism and encouraged fissiparous tendencies in the national polity. Simultaneously, numerous socio political and economic factors also combined together to spawn ethno nationalist movements in the North Eastern India. Thus, today India faces a challenging task of democratic management of numerous ethnic conflicts, some of these with secessionist overtones in the North East.

Politico-Cultural Divide

Historians maintain that the boundaries of ancient India roughly coincide with those of the present day South Asian Association for Regional Cooperation (SAARC). There are some who believe that except for the period under the British rule, India has never been a nation state. Other historians disagree and maintain that India has always been a cultural and economic entity and the North East has always been an integral part of India. There is also a

Brigadier RS Grewal, VSM is from the Corps of Engineers. He is the Director, Sikkim Manipal Institute of Technology, Rangpo, Sikkim.

Journal of the United Service Institution of India, Vol. CXXXIII, No. 552, April-June 2003.

school of thought which maintains that the population of North Eastern India has greater affinity with the people of South East Asia than with those from the rest of India. The political and cultural isolation of the Seven Sisters has spawned these observations. Perhaps, it is because of such divergent views and the prevailing situation that it is not very uncommon to hear the Indian leaders emphasising the importance of early integration of the people of the North East into the national mainstream.

It is believed that the Mongoloid people entered North Eastern India at about the time when the Aryans arrived in the North West. The former settled down in the Himalayan belt and the foothills. Till the end of the first millennium, there was regular interaction between them and the indigenous population of India. The region had close affiliations with other parts of the country as well. The areas forming the present day Assam, Tripura and North Bengal formed a political and cultural entity under the sovereignty of indigenous rulers of Barman, Salastambha and Pala dynasties. Parasuram Kund, a famous temple along the banks of River Lohit establishes the links of the region with the rest of India and finds mention in the Puranas. Ancient ruins at Bhishmak Nagar related to the Mahabharata era, in the Roing District of Arunachal Pradesh, discovery of Malinithan ruins related to Parvati, Lord Krishna and Rukmini, embodiment of 'Ras Leela' in classical and folk song and dance forms in Manipur and the presence of a large number of Shiva temples in Upper Assam bear testimony to the close interaction between the people of North Eastern region and the rest of India. Some historians believe that the Vaishnavite culture spread from Upper Assam to other regions. A dance form, known as the Naga-Bihu dance, performed by the tribes of Tirap District of Arunachal Pradesh reinforces this belief. There is also evidence to prove that the cult of Goddess Shakti took roots during the first millennium in the Dibang Valley and Lohit Districts of present day Arunachal Pradesh. There is mention of a place of worship, known as the Tamreshwari Temple, located near the confluence of Rivers Lohit and Kundil, which was a famous centre for Tantric rites. The Guwahati State Museum is a repository of artifacts that prove beyond doubt the linkages of the region with the rest of India. The epigraphical evidence is in the form of plate inscriptions, dating back to 6th century AD, which are in Brahmi script and Sanskrit language. It

is believed that the Assamese language has evolved subsequently from the Brahmi script and Sanskrit language. A sculpture of tribal Durga displayed in the Museum also reinforces the cultural linkages of the region with the rest of the country.

The situation changed in the early half of the second millennium with the arrival of Muslim invaders in the North West and Ahoms in the North East. Though the Mughals were able to extend their influence upto Central Assam, the Ahoms continued to rule over the Upper Assam and the territories East and immediately South of it. Consolidation of the Ahom kingdom in the North East prevented the spread of Mughal influence in the region. Thus began an era of isolation of the North East from the rest of India. It continued till the late nineteenth century when the British defeated the Ahoms and wrested control of Assam from the Burmese. But, due to administrative constraints, the British enacted various laws like the Inner Line Regulation Act 1873, which inhibited the full integration of the region with India, though it remained part of the British India. The above, however, does not imply that the arrival of Ahoms brought about a complete halt to the interaction between the people of the two empires. Cultural and linguistic affiliations continued, though, at a much lower level. Plate inscriptions dating back to the Ahom period displayed in the Guwahati State Museum stand testimony to this fact. These inscriptions are in Assamese while the language is in Sanskrit. It is just that the two regions were being ruled by sovereigns belonging to two distinct cultures. The rulers of the North East showed greater affinity with the region East of the Patkai ranges. The era saw the beginning of North Eastern India becoming a bridge between the Indo-Gangetic and South East Asian cultures.

The British developed the communication network in the region with the sole aim of exploiting the local resources. Military operations in Burma during World War II forced the British to change their policy. A large number of airfields, the famous Ledo road and the road linking Dimapur to Kohima and further to Burma via Moreh and Tamu came up. Rail network of the country was extended further to the North East and the old Dibrugarh-Dhola railway was linked to it at Tinsukia. After partition of the country in 1947 only land route available to link North Eastern India with the rest of the

country has been the narrow Siliguri corridor. The fragile and circuitous route has shattered the economy of the region. The region also lost its most natural port of entry at Chittagong that provided an access to the outside world for the states of Tripura and Manipur and to an extent to Mizoram and lower Assam. The inland water transport network from Dhaka to Guwahati also got disrupted. The final blow came with the earthquake in 1950, which caused extensive damage to the river ports at Sadiya and Dibrugarh. These developments compounded the effects of political and cultural isolation from the country that the region had suffered during the major part of second millennium. Thus, the historical chasm was further dilated by geopolitical factors brought about by the artificial boundaries between India and Pakistan.

In addition to the poor state of infrastructure, which inhibited the economic growth of the region, the political and cultural isolation further perpetrated by our colonial masters widened the chasm between the North East and the rest of the country. It is ironical that even today, after 56 years of independence, there is no school level textbook, which deals with the history over the ages of the complete Indian sub continent. By no stretch of imagination can the blame for this be laid at the door of our erstwhile colonial masters. This politicisation of the education curricula has contributed to the ignorance about the region amongst not only the average 'educated' Indian but also the elite. A survey carried out in a prestigious institute like the Tata Institute of Social Sciences, Mumbai highlighted that almost 90 per cent of its post graduate students were ignorant about the socio economic environment and the cultural heritage of North Eastern India. The people of the North East do not accept the culture and traditions of Indo-Gangetic 'heartland' as those of the national mainstream. They are proud of their past, especially of their ability of having been able to withstand the onslaught of the Mughal empire. The isolation of the region over the past so many centuries and lack of realisation on the part of the elite of the peculiar historical, social, and cultural factors in different sub regions of the North East have resulted in disillusionment and a feeling of neglect in them.

Crisis of Identity

North East is home to almost 75 major population groups and

sub groups who speak almost 400 languages and dialects. Based on factors like race, language and religion, various sub regions in this part of the country display distinct socio-cultural and political leanings and attributes. This was one of the main contributory factor for the creation of four states out of the erstwhile state of Assam. The rationale of size of population and economic viability was sacrificed in favour of political pressure, which invariably was accompanied by violent means. However, the elite of different dominant groups, having started the chain reaction, now find themselves incapable of controlling it. There are demands for further sub division of some of these states. For example, the Bodos are demanding a separate state; people of Changlang and Tirap districts of Arunachal Pradesh are demanding to be given the status of Union Territory. On the other hand, the Nagas are demanding Nagalim, which means amalgamation of Naga inhabited areas of Arunachal Pradesh, Assam and Manipur with Nagaland. The root cause of this ethno nationalistic phenomenon lies in a feeling of economic deprivation and the failure of the state machinery to meet the local aspirations. Invariably, this failure on socio-economic front gets attributed to ethnic bias in distribution of resources, which are already scarce.

Creation of autonomous district councils or for that matter the village councils has not helped much in bringing about an economic transformation of the region. The concept of autonomous councils granted in the Sixth Schedule of the Constitution was evolved to achieve development by accelerating the process of socio-economic upliftment, and thereby ensuring progress and prosperity. However, that has not happened and the people have got disillusioned. The states in the region are heavily dependent on grants from the Centre. Their own revenue collection is very meagre. Rampant corruption has resulted in regular siphoning off, of a big chunk of the resources by vested interests. Thus, the states have failed to deliver the basic requirements of their societies. This failure to meet the aspirations of the people has generated demands from various elite-groups for creation of new states. Invariably, in a society riven with gargantuan tribal loyalties, the criteria of ethnic identity in such demands gets projected more predominantly against that of economic viability. The people who make these demands forget that whether it is a regional council, a state or a union

territory, these are all vehicles and mechanisms of governance. Their ultimate objective is the welfare of the people. Even a village panchayat could produce good results if it is efficiently managed. The need is for good governance. Vested interests have ensured that the public attention is diverted from the fact that it is not the concept of district and village councils in the North East that has failed, but the managers, both at bureaucratic and political levels have been found wanting. So far these councils have been looked upon as sources of power status and easy money by various interest groups, who have squeezed these for personal gains. That has been the crux of the problem.

A major grouse of the people of the North East is against the system of representation in the Parliament. The common feeling is that due to their insignificant strength their views do not carry weight at the national level. To an extent it is true. Arunachal Pradesh, Nagaland, Manipur and Mizoram have just one Member Parliament (MP) each to represent them. In a system dominated by vote politics these MPs are unable to project the problems of their respective states forcefully. The tribal based intra sub-regional rivalries have inhibited the growth of political parties of significance. Consequently, the points of view of the states generally do not get projected at the national level, thereby, bequeathing a sense of despondency. Even within the national level parties, the states of the region do not have adequate representation in various decision-making fora. In addition, corruption at all levels results in the benefits, whatever may be their scale, getting siphoned off either for unproductive ventures or for personal use by various interest groups.

A major factor that adds to alienation of a sizeable segment of population is the rapid transformation taking place in the tribal societies. Traditionally, the tribals in the region have been dependent on community based societies. Though, by no stretch of imagination can these societies be termed as primitive, yet they have not had the benefit of modern science and technology for their development. The people generally believe in super natural powers and tribal customary laws govern the life in communities. The infrastructural growth in the region, though not at a desirable pace and scale, has exposed these communities to the market economy and the

consequential developments in the socio-political fields have created a conflict situation between the past value systems and the forces of modernisation. Thus, the tribal communities are now in a state of flux. The concept of nuclear families is fast replacing the community-based way of living. The hold of village elders over the society is weakening by the day. Trust and credibility, a significant facet of tribal societies, is fast making way for a materialistic way of living. Earlier, the village communities had their own models of democracy which functioned very efficiently. Their concept of democracy has now been replaced by a set up which has been subverted by corruption.

Introduction of irrelevant educational curricula has weaned away the youth from their traditional occupations but has failed to provide them with any worthwhile vocations. Insurgent movements and trade in narcotics have taken their toll amongst the youth. Resultant changes in the societies have been very fast and have resulted in a feeling of invasion of an alien culture. Thus, an apprehension of a crisis of identity has been generated by the fear of cultural submergence.

Underdevelopment and Social Insecurity

North Eastern India has been facing increasing challenges as it copes with pressures emanating from its ethnic diversity. The rising challenges of ethno-nationalism and erosion of the state authority pose an increasing threat to the national security. Progressive collapse of political and public institutions, increasing social unrest and growing corruption in public life have greatly undermined the confidence of the common man in the ruling elite.

The present socio political scene in the North East thus underlines disturbing trends. According to an estimate, there are more than 40 insurgent groups operating in the region. Absence of credible conflict management mechanisms is evident from the situation which is deteriorating by the day. Widespread poverty and unemployment, increasing economic disparities as compared with the rest of the country and those within the region and growing corruption in public life are further adding fuel to the fire. Increasing mobilisation for economic and political space by more and more socio-economic groups is causing turbulence in an environment of

limited resources and constrained capabilities of redistribution of wealth. Thus, the fear of identity is further compounded by a social security factor, which essentially boils down to protecting the land from outsiders and in some cases within the region from other ethnic groups. The origins of Inner Line Regulation Act, 1873 could be attributed to that. The fears of the tribals of all the North Eastern states are heightened by the fate that has befallen Assam. Since the state did not come under the ambit of the Inner Line Regulation Act, the influx of people from outside has created a situation where the Assamese are in the danger of being reduced to a minority in their own state. Therefore, different interest groups in Meghalaya are demanding that the Inner Line Regulation Act be made applicable to their state also. The concept of 'lebensraum' being propagated by Bangladesh, albeit without actually declaring so, confirms that the fears of the people of the region are not totally unfounded. They perceive their need for survival as tribals paramount and give secondary importance to development. Some state governments do not even levy sales tax, the most productive of state taxes, to avoid issuing registration certificates which could later be produced as proof of residence.

The Present Situation

Assam. In the first half of the 20th century, Assam could afford some migration from other parts of the country. There was a tremendous demand for cheap labour to work in the tea estates. But it started a trend which continued unabated. Creation of East Pakistan in 1947 compounded the problem further. There was an increase in the total population of Assam by 82 per cent during the period 1951 to 1971. After 1971 the demographic pattern in 10 out of the 23 districts of Assam has completely changed. This has created divisions in the society on ethnic and religious grounds. Rampant unemployment has further aggravated the situation. In such an environment the disillusioned and unemployed youth have provided a fertile base to the anti national elements to foment trouble. The anti-outsider Assam Movement which started in 1979 resulted in the Assam Accord, 1985. The Illegal Migrant (Determination by Tribunals) Act, or IM (DT) Act that came into being as a result of the Assam Accord has not been effective. The fears of the Assamese are not without a material bias. The caste-Hindu

Assamese have become a minority in their own land. The Bengali Muslims who had settled down in the Brahmaputra Valley registered themselves in the 1951 census as Assamese speaking. Thus, they became a dominant vote bank with a majority in some districts. Moreover, following identity assertions in the North East, many small and marginalised communities who had earlier identified themselves as Assamese in the censuses, started stressing on their own identities. Most vociferous amongst these were the Bodos and Morans who were the inhabitants of the land before the arrival of the Ahoms. The Assamese Hindus are apprehensive that with the rapid rise in the number of Bangladeshi Muslims, the latter will become a politically dominant majority. Different political parties have exploited the situation to further their own partisan ends and the problems of identity and 'culture-in-crisis' has taken a grave turn. In trying to assert their identity the Assamese have alienated both the Bengali Hindu as well as the Bengali Muslim settlers. The Assam Accord has failed because there is no agreement on the definition of 'Indigenous Assamese'. Similarly, the IM (DT) Act has not made much headway because it is virtually impossible to detect a foreign national based on the criteria laid down by it. Instead of succeeding in deporting any sizeable number of foreign nationals, the dispute today, after 16 years of enacting the law, is whether we should have two different laws in the country to deal with foreign nationals; the IM (DT) Act applicable to Assam and Foreign Nationals Act, 1946 for the rest of the country. Similarly, the Bodo Autonomous Council (BAC) has failed because it has not been possible to lay down its territorial jurisdiction. With the result there have been no elections to the BAC since its inception. Thus, the situation today is really explosive with the cadres of various militant groups operating in the state to guard the interests of their respective communities. The United Liberation Front of Assam (ULFA), surrendered ULFA (SULFA), Bodo Security Force (BSF), National Democratic Front of Bodoland (NDFB), Bodoland Liberation Tigers Force (BLTF), Bengal Tiger Force (BTF), All Assam Adivasi Suraksha Samiti (AASS), Muslim Security Force (MSF), Muslim United Liberation Front of Assam (MULFA), Muslim Liberation Tigers of Assam (MULTA) and United People's Democratic Society (UPDS) in Karbi Anglong are some of the outfits operating in the

area offering an ideal opportunity to foreign powers to exploit the situation.

Nagaland. The Nagas have been the most obstreperous agitators to establish their separate identity. They had raised the issue with the British in 1929 and had again made a representation before the Simon Commission in 1935 in support of their demand. The Hydari-Naga accord signed at the time of Indian independence in 1947 placated them to some extent. But there were some disgruntled and vocal elements who again revived the demand for an independent Nagaland. Inept handling of the situation worsened the matters further. The Naga insurgency started in 1956. Though, a ceasefire has been in force since 1997 in Nagaland, the vexed problem is defying a solution. National Socialist Council of Nagaland, (Isak-Muivah) or NSCN (IM) and NSCN, Khaplong (K) are the two major insurgent groups. When Nagaland became the 16th state of India, it constituted just one district of Assam. However, the Nagas are not confined to Nagaland alone but are spread across contiguous areas in Manipur, Assam and Arunachal Pradesh in India and in Myanmar across the border. The Nagas claim the Tirap District in Arunachal Pradesh, areas in Sivasagar, Karbi Anglong, Golaghat and North Cachar districts of Assam and Ukhrul, Senapati, Chandel and Tamenglong districts of Manipur. In fact, the state assembly of Nagaland has on three occasions passed resolutions demanding a merger of these areas with their state. This concept of greater Nagaland is known as Nagalim. The situation today is so grave that various anti national elements have resorted to mass scale and systematised extortions. The so-called Government of Peoples Republic of Nagalim (GPRN) has admitted through a statement issued on 29 July 2001 that they have been collecting taxes from the population annually. The concept of Nagalim is likely to give an ideological boost to the insurgent movement that had started losing steam due to lack of ideology. The people were getting fed up with the insurgency related environment and the new recruits in the underground movement were turning out to be ignorant brigands living on money extorted from their own people. The concept of Nagalim, an ethnicity based state, can never be accepted by the Government of India.

Manipur. Manipur was a princely state, which acceded to the Indian Union. The hill areas South of Assam were not under the

British Crown. Manipur, Tripura and Khasi hills all merged into India as part of Assam after independence. For many years, politics, not economics, was the dominant issue. Initially a mentality persisted that they were not part of the Republic but were pressurised into joining it. After they became part of India, their struggle for identity started. It was only after creation of the new states that the people started thinking about the economic issues. But mismanagement of development related problems brought the ethnic issues to the forefront. Nearly 80 per cent of the territory of Manipur is hilly terrain. Two thirds of the 2.3 million population of the state is Vaishvanite Meitei Hindus who live in the plains. The rest, including various Naga tribes, live in the hills. Concessions given to the tribals have antagonised the Meiteis resulting in revivalism of old Meitei religion and fanning anti-outsider (anti-Mayang) feelings. Manipur is the second-most literate state in India with 85 per cent literacy. Thus, the level of political awareness of the people is very high. Poor economic conditions of the state provide the basis for militancy and ethnic conflicts. The ethnic divide in Manipur is the most pronounced in North East. Naga-Meitei, Naga-Kuki and Kuki-Paite ethnic conflicts abetted by vested political interests have throttled all economic and political activities. The blockade of National Highway (NH) 39 by the Nagas in July-August 2001 to starve Manipur of all essential supplies is a classic example of the depths to which the malaise has penetrated.

Tripura. Tripura is surrounded on three sides by Bangladesh and has suffered immensely due to illegal migration from that country. Its tribal population has been reduced to a minority of 28.5 per cent from 93 per cent in 1947. The neglect of the effects of illegal influx into the state, poor governance and mismanagement of the economy have given rise to insurgency. Different militant outfits like the Tripura National Volunteers (TNV), All Tripura Tiger Force (ATTF) and National Liberation Front of Tripura (NLFT) have sprung up in support of the ethnic cause of the tribals. Some of these have even forged links with the Mizo National Front (MNF), NSCN (IM) and the ULFA. The sectarian feelings of tribals versus non-tribals keep fuelling the secessionist demands.

Mizoram. Neglect of genuine grievances of the people is another reason for the unrest which invariably gets attributed to

ethnic bias. For example, the insurgency in Mizoram erupted mainly because of the famine in the 1960s and the neglect of the people by the powers that be, despite early warnings. The volunteer force raised by the Mizos themselves helped in famine-relief operations. Having realised the apathy of the government towards their plight, the same group later resorted to use of arms in support of their demand for an independent Mizoram. Fortunately, the insurgency related problem has been resolved and Mizoram has been by and large peaceful. But, lately the Bru nationalists have raised their demand for independence. Bru National Liberation Front (BNLF), a Reang outfit, has been operating on the borders of Mizoram demanding independence. Once again it is an insurgent movement based on perceived ethnic bias emanating from poor governance and inequitable distribution of scarce resources.

Arunachal Pradesh. In majority of the cases the problems related to ethno-nationalism have been either raised by the politicians or have been exploited by them. In Arunachal Pradesh, which had been till recently free from any problems related with insurgency, the Chakma settlers from Chittagong Hill Tracts and Hajong oustees of Kaptai dam have been denied basic citizenship rights despite persistent efforts by the National Human Rights Commission (NHRC) and clear cut rulings by the Supreme Court. Similarly the 86th Amendment Bill of 1999 that has been introduced in the Rajya Sabha at the insistence of Arunachal Pradesh has been criticised by the Lok Sabha's Standing Committee on Urban and Rural Development. The Bill states that the population in Arunachal comprises only of indigeneous tribals but the Committee has pointed out that 36.34 percent of the population is non-tribal. This clearly highlights the ethnic under-currents that operate in the environment.

The Way Ahead

Given the economic environment, the present socio-political scene in North Eastern India is a cause for concern. Assertion of ethno-sectarian identities and the threat of religious fundamentalism, at least in some areas, is unleashing new pressures across the region. The steady influx of illegal immigrants has added to the complexities of the multi-dimensional problems related to ethno-nationalism. It has distorted the social, economic and political profile

of the region. The urgent need for long-term constructive policies to reconcile divisive and separatist forces for preserving national cohesiveness in the multi-plural societies in the North East cannot be over emphasised. The requirement of enduring political stability and good governance responsive to the needs and aspirations of the people remains imperative. There is a need for building bridges of trust through dialogue and exchanges in order to bring about a change in mindsets and political perceptions which have been condemned by inadequate understanding of the complexities of the problems.

North Eastern India continues to remain mired in acute problems of under-development and staggering levels of poverty. Illiteracy is keeping large segments of the society in shackles of want and deprivation. There is large scale unemployment, which provides a fertile breeding ground for insurgency. One way to put North Eastern region on its feet is to use development to usher in peace. It will build confidence and stop nurturing insurgency. The tendency amongst the youth to join insurgent groups has to be curbed by providing employment. This need not necessarily be through government jobs. The thrust of the economic policies should be towards generating self-employment. Fisheries, poultry farming, horticulture, floriculture, agro-based industries, tourism and services are some of the segments with large potential for generating employment opportunities. Development of infrastructure is a must for the economic activities to prosper. That in long term will need investment. The youth need to be made aware that investment flows in only where peace prevails. There is a need to encourage free, frank and open debate on issues affecting the North East. The population must understand the issues in their correct perspectives and in totality.

Identity and security, which are such emotional issues in the North East can be assured through various means like ensuring social upliftment. Land alone need not be the only means of security. Eliminating poverty, illiteracy and ushering in economic reforms can ensure social security and preservation of identity. This can only come about by good governance. Strengthening of grass root level democracy can help in this direction. It must be remembered that the tribal societies were basically democratic in nature. They

had lost their moorings due to the influx of alien values ushered in by the so-called development. To restore the situation, sincere efforts are required to strengthen the functioning of tertiary level institutions like panchayats and autonomous councils at village and district levels. There have been half hearted attempts in this direction before. Numerous, hefty packages for the North East have been announced on various occasions, but the benefits have not percolated down to the people at ground level. Unless accompanied by strict accountability, pumping in of money alone will not help. Power brokers who have in the past exploited the communities need to be eliminated. Panchayats and district level councils need to be more effective. At the higher level the mindset of the leaders has to change. The states have been totally dependent on the Centre. This will have to change. The economies of the states in the North East have to be made self sustaining in a time bound manner. All that will require political will and committed bureaucracy. Democratic conflict management requires a substantive distribution of power between the various levels of the state structure.

Problems of ethnic conflict can be resolved by political and group leaders through accommodation, bargaining and political process, particularly by seeking accommodation with minority groups. But the rider here is on genuine leadership. Leaders must be sincere and sensitive to the needs of the people and such leadership can only come about when the mechanism for governance lays emphasis on accountability. A political and administrative structure which is accountable to people at grass root levels will always tend to strike a balance between individual and group rights.

There is also a need to organise and reproduce a culture, which is more receptive to tolerance and non-violence. The problems created over the decades cannot be solved overnight. There is a need to develop a sense of trustworthiness rather than spouting rhetoric. This is of paramount importance in view of the fact that both political and civil societies in the region have become thoroughly polarised and violent. One vital area where action is needed to overcome the malaise is education. Education in India nurtures an Indo-Gangetic bias. Consequently, it creates a system devoid of

democratic norms particularly in the North East. The people here do not get a feeling, right from their childhood, of being part of a set up at national level. What we need is not only an education that champions democracy but also a democratic education.

Allegations of an unabated influx continue to be made in Assam. Serious efforts are needed from all quarters to solve this vexed problem which would need involvement of Bangladesh. India and Bangladesh have to jointly formulate a strategy for developing Eastern flank of South Asia. Apart from addressing the problem related to illegal influx of migrants from Bangladesh in isolation, a transit treaty could prove to be beneficial to both. It could lead to joint exploitation of the mineral wealth of the region. Once the people of the two countries realise the benefits of mutuality of interests, some of the irritants in their relationships may tend to disappear.

Peace in North Eastern India is possible only through negotiations and by taking into account holistic views of all ethnic groups. The Seven Sisters need positive peace which is people friendly and not the negative one imposed forcibly with deployment of security forces. There is tremendous ignorance amongst the people of the country about the situation in the North East. Restructuring of the curricula at school and college levels could provide a long term solution. Help of the print and the electronic media could be taken in the short term to educate the people. So far the media has not handled the situation sensitively. On their part the ethnic groups need to talk to one another to clear up any misunderstanding and help peace prevail in the area. Indian bureaucracy and political leadership will have to rise to the occasion to help save the Seven Sisters.

Prosecuting Terrorists : A Case for Use of Military Justice Apparatus

Major General Nilendra Kumar

"Enormous offences call for a greater axe"

Sir Frederick Pollack, English Jurist

The unprecedented nature of terrorist attacks on 11 September 2001 in the USA has brought to focus the global threat by growing menace of terrorism. This single incident has exposed the extreme vulnerability of even the most powerful nation to the danger of violence. The need for a global coalition was felt when the terrorists struck at the World Trade Centre, a symbol of the American economic strength and the Pentagon, the nerve centre of US Military power. Perhaps they intended to target the White House as well.

The unabated militant activity in the J and K and other parts of our country continues to be a serious security concern. More than 60,000 civilians and 9,000 security men have died in terrorist attacks so far, according to the statistics released by the Government.¹ Terrorism for India is no longer an abstraction, or something associated with Kashmir alone. Questions on military power and a state's ability to guarantee security and the citizen's right to it have come into focus as never before. Terrorism, cross border or of other kinds, will have to be met by the armed response of the State. The need to ensure the security of the citizen and State in its comprehensive dimension requires action across all sectors. The US led international crack down on terrorism has presented us with a unique opportunity to take this fight to the finish. Those who kill innocent people do not deserve mercy. The often voiced concern at the inadequacies in the existing judicial

Major General Nilendra Kumar is the Judge Advocate General at the Army Headquarters, New Delhi.

Excerpted from the talk delivered by him at the USI on 19 June 2002.

Journal of the United Service Institution of India, Vol. CXXXIII, No. 552, April-June 2003.

system to effectively deal with the challenge of terrorism cannot be said to be wholly unjustified. According to the experts, the reality is that society's fledgling system of criminal justice needs to be further strengthened to deal with terrorism.²

Guerrilla insurgencies can grind on for decades, however, fiercely opposed by traditional fighting forces. The most pressing need before the country at this juncture is to defeat the forces of terrorism. Unprecedented challenges call for extraordinary solutions. The expeditious trial of terrorists and insurgents is a prime requirement. A sensitive and complex challenge is the utilisation of all resources available to the Government to deal with terrorism.

According to the law of armed conflict, terrorist acts are subject to criminal prosecution by the state authorities in accordance with the national law. States are bound to do everything in their power to prevent terrorist acts from being committed by individuals or in territory under their jurisdiction. This puts a direct obligation on the persons who act on behalf of the State, including members of the armed forces, the police and similar organisations. Military legal system consists of an effective and trained cadre of officers. They are capable of fair, prompt and impartial disposal of cases involving legal matters concerning security. States are under obligation to enact pertinent domestic legislation to ensure respect for the rules of international public law. The document submitted as a draft by India at the UN Working Group on international terrorism has devoted itself to this aspect. Article 18(2) of the draft convention is in conformity with the position of law concerning armed struggles of different kind. The draft states, "The activities of armed forces during an armed conflict, as those terms and understood under international law, which are governed by that law, are not governed by this convention, and the activities undertaken by the military forces of a State, in the exercise of their official duties, in as much as they are governed by other rules of international law, are not governed by this convention."³ The Indian draft does not provide for any licence or exemption to armed forces or military personnel for any offence of which they may be accused but only treats the legal action concerning such offences as better pursued under a different regime.

Within the scope of international humanitarian law, terrorism and terrorist acts are prohibited under all circumstances, unconditionally and without exception. The authorities of the parties to the conflict, and all states party to the humanitarian instruments, are obliged to prosecute any alleged offender against the prohibitions of terrorism. Additional Protocol II contains a statement of fundamental guarantees prohibiting at any time and anywhere acts of terrorism. The law of armed conflicts is particularly well developed and can provide guidance to the legal approach to terrorism in peace time.⁴

What is the nature of the threat? The opponent is a totally motivated and trained fighter. He does not wear uniform but is armed, and does not belong to a particular nation. On the contrary, he is a part of a team belonging to different nations speaking in different dialects. The name or identity of their commanders is shrouded in mystery. So are his targets and actual plans.

The other dimension is the gravity of the danger. The global terrorism which Indians used to refer so far as proxy war or a low intensity conflict, has struck in different countries. The community of nations has now agreed on the need for an international coalition. In our context they have struck at our Parliament, the American Consulate at Kolkata, the Raghunath temple in Jammu and in countless other places. Thousands of innocent civilians including women and infants have been victims to their senseless killings.

Restricting the efficacy of usual criminal justice system is prosecution and conviction of the captured terrorists. The problem relates to collection of evidence and building of a prima facie case. Second factor is the inadequacies of the law enforcement agency to carry out pre trial investigation. Thirdly, to appoint a jury or a judicial tribunal for disposal of their cases is not easy. Coupled with this is the question of providing shelter to the witnesses and court officials. There is also an imperative need to protect the sources of information and methods of collecting clues and testimony against them. It would be desirable to adhere to the rules of natural justice and provide the accused persons the desirable judicial safeguards.

Even when the authorities succeed in careful mustering of all available clues, they have to be prepared for intimidation and threats. The extent of danger and risk involved in the trial of terrorists can be illustrated from the fact that the prosecution of four men charged with kidnapping and killing of American reporter Daniel Pearl had to be shifted out of Karachi to the central prison in Hyderabad (Pakistan). Such a decision had to be taken because of a threat to blow up the central jail. The Judge Mr. Abdul Ghafoor Memon of the anti terrorist court had to be replaced because he had allegedly failed to stop the accused from making threatening gestures at witnesses and the prosecution team. The militants on trial appeared intent on hijacking the proceedings wielding their notoriety to intimidate witnesses, lawyers and perhaps even the court officials. The risk involved is real and disclosure of the names of the security detainees is fraught with danger. The US Attorney General's representative pleaded before a three judge State Appeals Panel in New Jersey that disclosing the names of some detainees could deter them from cooperating in the investigations and would let terrorists know what information the government has gathered.

What are the type of problems relating to security and terrorism? Lack of legal authority with Station Commanders and security personnel is a major handicap to carry out search operations in these areas. The same results in loss of valuable time and element of surprise in trying to seek help from civilian agencies. Unsuccessful prosecution is characterised by failure of the witnesses to accurately recapitulate the events. Evidence is tampered with and diluted. Witnesses are terrorised and they are reluctant to come forward to depose in any militant/terrorist related case. Witnesses are afraid of their own security and safety of their families. There is a perceptible feeling of hesitation and fear amongst a section of the civil judiciary. They are normally not enthusiastic about prosecuting the cases filed against the terrorists. Accused persons generally manage to secure bail. The instances of the local civil police and prison officials having been compromised are not infrequent. Another major reason is shortage of efficient and competent government lawyers for conducting prosecution. Poor conviction rate in the trial of militants and terrorists is primarily due to careless and incomplete investigations. It would be significant to

peruse a few samples of actual instances. In 1995, police nabbed five members of the Babbar Khalsa International group allegedly carrying 1.4 Kg of RDX and an AK-56 assault rifle. The trial under the Explosive Substances Act could not stand because the quantity of RDX produced in the court measured only 920 gms. The police officials were at a loss to explain where the balance went. The AK-56 sketch submitted at the trial did not show a magazine. This gave rise to a doubt that the magazine may not have been recovered from the accused. In another case, a Joint Police Commissioner was unable to convince the court that the statement of an accused in a TADA (Terrorist and Disruptive Act) case was recorded by him and not by his junior.⁵ Yet in a different case the police admitted having wrongly showed recovery of arms from the house of an accused although it was actually made from the possession of his accomplice. A separate trial under the Explosive Substances Act fell through because policemen gave varying versions about the manner of arrest. There was confusion as to which official had signed the seizure memo. There have been numerous instances of witnesses refusing to identify the accused persons.

There is a pressing requirement to co-opt the military justice system by utilising it in the fight against terrorism. It is for consideration that mercenaries apprehended for terrorist offences should be tried by military tribunals. The basic rule of international humanitarian law as enunciated by Additional Protocol II to the Geneva Conventions lays down that, "No sentence shall be passed or penalties executed for offences related to the conflict except pursuant to a conviction pronounced by a court offering the essential guarantees of independence and impartiality." Therefore use of military law apparatus in such situations would not be contrary to the International Humanitarian Law. Two examples of such a practice are available from the practice followed by Pakistan and the USA.

Pakistan's military government has issued a decree to appoint Army officers as judges in special anti-terrorism courts. The decree provides for the inclusion of one Army Officer and two civilians in three judge courts that will try offences classified as terrorism. The Army officers so appointed are to be of a rank not lower than

Lieutenant Colonel. The new regulation has put civilian and military judges together in the same court in Pakistan for the first time. Reacting to the delay by the courts in delivering judgements, the new decree says that the proposed courts must decide a case within 15 days. Such courts have been invested with the jurisdiction to try accused persons facing charges relating to kidnapping for ransom, hijacking or inciting religious or ethnic hatred.⁶

It would be interesting to peruse the model presented by the US administration in the form of Military Commission Order No.1 issued on 21 March 2002 and Department of Defense Order on military commissions promulgated a day earlier. According to these executive orders, disposal of cases against non US citizens who are members of Al Qaeda and others involved in acts of international terrorism against the USA together with their sympathisers are proposed to be tried by a military commission. Each commission would consist of at least three to seven members appointed by the Secretary of Defence. The members would be serving officers of the Armed Forces, reserve or National Guards or retired personnel recalled on active duty. A Presiding Officer is to be chosen from amongst the commissioned members who would be judge advocate. The Presiding Officer has been envisaged with the authority to admit or exclude evidence. He has power to close the proceedings, to protect classified information and to protect the physical safety of participants.

The defence and prosecution are both to be conducted by officers belonging to the military legal set up. The accused is permitted, however, to engage a civil counsel for his defence. Elaborate provisions have been drafted for conduct of a trial including pre trial procedure and post trial scrutiny. The accused shall be presumed innocent until proved guilty. He would be furnished a copy of the charge sheet in English and his own language. A conviction would require a vote 2/3 of the commission but a death sentence would need a unanimous vote. There are certain distinct measures intended to ensure safety and maintain security while also securing a speedy disposal. The degree of proof is to limit beyond a reasonable doubt as opposed to conclusive proof in normal situations. The civilian defence counsel may be excluded

from the proceedings. Photography, video or audio broadcasting of the proceedings is prohibited. The individual votes of the members of the commission are not to be disclosed. The testimony of the witnesses may be obtained by telephone, audio visual or other electronic means including video conferencing. Also envisaged is use of pseudonym during closed proceedings. The trial may be held in camera to protect classified or sensitive information, physical safety of participants, intelligence or enforcement sources, methods and activities and also in national security interests. A full and fair trial is envisaged. The Presiding Officer has been empowered to take suitable measures to cut short delay. The procedure mandates an administrative review of the proceedings by a three member panel followed by a review by the Secretary of Defence. The authority for final decision vests in the President of the United States.

It is not known what is the rationale behind excluding the US citizens in case they happen to be members of Al Qaeda. In any case, the above model has certain distinct advantages. Admitting testimony on telephone or video conferencing would enhance greater physical safety of the members of the commission, officials and witnesses who can be adequately protected. In federal court there is no method of protecting sensitive intelligence intercepts required as proof. Secondly, in federal criminal trials, the rules governing the admission of evidence - what can be placed before a jury for consideration in fact finding - are strict and unchangeable. Not so in the military commissions.

The rules governing the admission of evidence would allow production of any evidence found to have been taken in an illegal search by the officials.

The American legal experts take care to explain that firstly Al Qaeda members are not entitled to the status of prisoners of war. Supposing they were, even the International Humanitarian Law (IHL) permits use of military trial for war crimes. In fact, a military court is preferable to the prosecution by domestic judicial system.⁷ Law of war allows trials to be held in camera in the interest of state security.⁸ It permits use of hearsay evidence. Although cases of Al

Qaeda terrorists may be finalised early, the Conventions envisage holding of prisoner of war in captivity till the hostilities end. "The Geneva Convention applies to conventional soldier, not to the terrorist being held at camp X-Rat."⁹

We would need to take certain legislative steps to ensure effective prosecution of terrorists under military law. The definition of an "enemy" under the Army Act includes any person in arms against whom it is the duty of a person subject to the Army Act to act. Therefore, a terrorist squarely falls under the definition of an enemy. The disposal of a case against such an enemy for an offence relating to a terrorist act would then be legally feasible under the Army Act. This can be achieved by taking recourse to the required legislative process. The definition of a 'terrorist' should be expanded to include a person who attacks or resists or otherwise restricts the due discharge of duties by any members of the Armed Forces or in any other manner abets the commission of a terrorist act. The officers of the Judge Advocate General's (JAG) Department must be included in definition of "special courts" provided for under the Prevention of Terrorism Act (POTA) legislation. This would facilitate utilisation of their expertise for prosecution of terrorists under the aegis of POTA.

A number of vested interests under the garb of Non Governmental Organisations (NGOs) are reportedly working for terrorist organisations. Their linkage with politicians and media provides them shelter from arrest and prosecution. The counter insurgency operations are vulnerable to the enhanced role of media and glare of human rights. While assailing the practice of often misuse of anti terror laws, the Supreme Court had suggested in the case of Gurmail Singh that action under the law meant to deal with terrorism could not possibly be "taken recourse to as a matter of course" but as a last resort for the good or betterment of the society.¹⁰

Retired Officers of the JAG Department may be included in the panel of lawyers selected to undertake prosecution of such offenders. The provisions of POTA have been designed for the prevention of, and for dealing with, terrorist activities. A re-look at

the Armed Forces (Special Powers) Act (AFSPA) to deal with terrorists in disturbed areas is called for. AFSPA may contribute significantly to clothe its provisions with more teeth. AFSPA could be amended to empower the armed forces officers to carry out interrogation of those apprehended under the Act. This will facilitate prompt exploitation of the intelligence unearthed so as to strike at the other offenders operating as part of the same outfit. Secondly, the confessions made by a captured terrorist and recorded by a military officer not below a specified rank should be admissible in the trial of such an offender.

The military legal system has certain distinct features. It is a self-contained code. It provides for extra territorial jurisdiction. The military code caters for a variety of offences that can be dealt by it e.g., charges for espionage under the Official Secrets Act, offences in relation to the enemy and punishable with death, mutiny and all offences triable under the ordinary criminal law i.e., Indian Penal Code.

The courts martial can be held at any place irrespective of the place of the crime. The provisions of the Indian Evidence Act are fully applicable. The accused is afforded normal judicial safeguards. The trial of the offenders is held in such a manner where the court martial proceedings are open to public which is allowed due access to attend. However, when required trial can also be held in camera. The procedure caters for trial of a single accused as well as joint trials. The courts martial are speedy, inexpensive and fair trials. Yet another advantage of trials by courts martial is the absence of provisions relating to release of accused persons on bail. It also avoids the mischief of appeals to numerous courts.

The organisational structure of the Army allows the flexibility to raise military prisons and prisoners of war cages. Such units should be reactivated to detain apprehended terrorists during investigation and pre trial stage. Service Headquarters should be delegated the requisite authority to nominate, engage and employ suitable counsels to undertake prosecution on behalf of the Government in offences involving threat to security. The functioning of special courts or undertaking trial of terrorists must be simplified

so as to achieve promptitude, protection of witnesses and cut down legal complexities. The trial must be held on day-to-day basis and completed within a maximum period of three months. Action to conclude extradition treaties with other countries should be accorded priority.

Compilation of national case – law of all litigation involving human rights should be organised on priority. Training the armed forces personnel in humanitarian law should be given added emphasis. Incorporation of this topic should be made compulsory in the training syllabi of the junior leaders. Legal advisers should be provided at the grass root level to the formations deployed in counter insurgency role. One of the principal measures intended for implementation of IHL is to provide for the appointment and training of persons qualified in IHL including legal advisers within the Armed Forces.¹¹ Services of these officers should be routinely utilised in the situations involving arrest of terrorists, recording of confessional statements, collection of admissible evidence, drawing up prosecution strategy, recovery of arms and equipment and its handing over to the civil police. To avoid the likelihood of weapons and ammunition of the security forces falling into the hands of anti national elements and being recycled, the quarters guard of armed forces should be equalled with and brought within the definition of "Police Malkhanas."

A question may be asked whether use of military legal apparatus for the intended purpose will run contrary to the Geneva Conventions. The answer would lie in formulation of an approach taking care to avoid infraction of the IHL. The Geneva Conventions do not apply to every form of military use. To illustrate, they do not apply to internal civil wars or the operations launched against piratical groups operating across international waters. Similarly, a member of global network of terrorists may not be entitled to claim shelter under the law of war as a prisoner of war. Firstly, the essential requirement of being a lawful combatant is not met in his case. For that he has to be under command of a responsible commander. Secondly, the stipulation about wearing a distinctive uniform is not fulfilled. He does not carry arms openly. Lastly, he is expected to fight in accordance with the laws and customs of war, which he does not.¹² Hence, he would have no legal or moral claim to a shelter under the Conventions.

According to Jakob Kallenberger, President of the International Commission of the Red Cross(ICRC), "International law, if correctly applied is one of the strongest tools that the comity of nations has at its disposal in the effort to reestablish international order and stability. The civilians have the right to be spared murder, torture or rape, no matter which side they happen to belong to. The Conventions and Protocols not only encourage states to bring perpetrators of war crimes to justice, they demand it, including by means of universal jurisdiction."¹³

A unique advantage of the proposed policy will be uniformity in approach as regards disposal of persons accused of terrorist offences and also those amongst military men who are charged for illegal acts and excesses. Impartial handling of cases with regard to both will undoubtedly inspire confidence in the public.

It may perhaps be argued that trial of terrorists by the military courts may not augur well for a democratic set up or that the concept may be open to abuse. The Supreme Court has held that mere possibility of abuse cannot be a ground for denying the vesting of powers or for declaring a statute unconstitutional. In *State of Rajasthan versus Union of India*; 1978 1 SCR 1, the Supreme Court held, "it must be remembered that merely because power may sometimes be abused, it is no ground for denying the existence of power. The wisdom of man has not yet been able to conceive of a government with power sufficient to answer all its legitimate needs and at the same time incapable of mischief."

References

1. 'Government spared no effort at consensus, says Jaitley', *Hindustan Times* (New Delhi), 27 March 2002.
2. 'Terrorism poses new challenge to International Justice System', *Times of India* (New Delhi), 7 February 2002.
3. Dr PS Rao, *International Terrorism, Self Determination and National Liberation*.

4. Hans-Peter Gasser, 'Prohibition of Terrorist Acts on International Humanitarian Law', *The International Review of the Red Cross*, July-August 1986.
5. Bhadra Sinha and Gaurav Kala, 'Why they go scot free', *Hindustan Times*.
6. Raja Asghar 'Appointment of Army men as Pak Judges draws flak', *The Asian Age*, 3 February 2002.
7. Third Geneva Convention, Article 84.
8. Ibid, Article 105.
9. Ruth Wedgewood, 'Prisoners of a Different War', paper circulated at 15th NS MILOPS Conference held at Bangkok, 3 to 6 June 2002.
10. Rakesh Bhatnagar, 'Anti terror laws are often misused : SC', *The Times of India* (New Delhi), 25 March 2002.
11. Implementing International Humanitarian Law : From Law to Action; Hand out by the International Committee of the Red Cross, Regional Delegation in New Delhi.
12. Article 4.
13. Statement at the 58th Annual Session ; the United Nations Commission on Human Rights in Geneva, 26 March 2002.

Kargil War Widows

Dr Leena Parmar

Importance of the Study

War widows of Kargil are different than other war widows in India. There are three basic differences. Firstly, each widow has got recognition not only in her village and district, but the nation has felicitated each widow. Secondly, for the first time, each dead body was specially flown in to the capital and then sent by air to the state capital and from there to the respective villages. Thus each martyr got a state funeral, which has been attended by thousands of villagers including several ministers and other VIPs. Thirdly, never before has the Government given so much of compensation money and other benefits to the widow. It is unprecedented in independent India. If we go through the records of earlier war widows, we will find Indian Government did not give the widow so much of benefits. So the Kargil war widows are special and their problems are of a different nature.

Status of woman in society generally denotes her position with others in terms of rights and obligations. Kargil war widows are young and most of them not educated. It is important to assess the extent of social control enjoyed by these women over their own lives. Secondly, the extent to which they have access to decision making process and are effective in position of power and authority. A survey of literature focused on women reveals that very little attention has been given to systematic study of war widows in Indian society. However, for the purpose of analysis they can not be treated as a homogenous socio-cultural category, as they are divided on the basis of rural-urban background, region, caste, class and ethnic groups. Constitutional and legal status of woman in present times should not be confused with the restrictions from which they suffered in the past. War widows have been seen only as daughters, wives and mothers with their normative rules of

Dr Leena Parmar is an Associate Member of the USI and Associate Professor of Sociology, University of Rajasthan, Jaipur.

Journal of the United Service Institution of India, Vol. CXXXIII, No. 552, April-June 2003.

conduct, but not as an individual with an identity of rights of her own. The compensation money which each Kargil widow has received has altered the social status of these women. At the same time, there are many problems. Each Kargil widow received Rupees 25 to 30 lakhs along with other benefits which include land or house, free education to children, electricity connection, free bus pass, solar cooker and so on. It is important to analyse the conditions of these war widows in the context of "Financial Benefits" and how these have affected them socially and psychologically.

Methodology

The technique used for the study is 'Unstructured Interview', 'Case-study' and 'Observations'. The study is confined to 54 cases in rural Rajasthan. The Rajya Sainik Board in each district sent the welfare officer in charge of war widows to facilitate identification of the widows and the location of the villages. The purpose of the study was explained to the war widows and their cooperation sought.

We have to understand the practice and pattern of widow remarriage in northern India and Rajasthan. It is very wrong to say that India never had the practice of widow remarriage. Although it was not very popular and not practiced all over the country, India was certainly not the land for *sati* (immolation of the widow along with her husband's body) alone. To substantiate this argument, let us discuss a few important studies in this regard. Data collected shows most of the women got married to their brothers-in-law. It is important to know about the practice. Many articles and news reportings have condemned the practice as if the practice started only after the Kargil War. So, it was important to study the phenomenon sociologically and historically.

Aja beti lele phere

Yoh margya to aur bhatere.

(Come daughter get married,

If this one dies, there are plenty more.)¹

This proverb was first recorded in the 19th century colonial Punjab and signifies a widespread acceptance of widow remarriage

that goes much further back into history. Its popular usage suggests not only the continuity of the tradition but perhaps even its strengthening. Clearly, certain rural areas of northern India, especially Haryana, Punjab and Rajasthan have upheld and practised widow remarriage in sharp contrast to the high caste Hindus elsewhere, who under the Brahmanical code, prohibited widow remarriage completely and upheld the ideal of *sati*. Folklore and tradition reveals an acceptance and celebration of the practice of widow remarriage, primarily restricted to its levirate form.² The colonial administrators projected the Brahmanical code as the dominant model, advocating a complete prohibition of widow remarriage. The *sati* ideal fitted with their view of India as a 'primitive society' direly in need of being 'civilised'. Yet even they had to acknowledge the existence of widow remarriage. According to them, it 'commonly' existed but only among the 'inferior castes'.³ In practice, widow remarriage was popular not only among the low castes but also among the 'agriculturist castes' so notified under the Punjab Alienation of Land Act, 1900.⁴

The imperial rulers ignored this fact. Pauline Kolenda argues that widow remarriage in its levirate form was quite common in India. This practice, therefore, has to be looked at as an alternative norm within north Indian kinship system. Unexpected moral support for widow remarriage came in the 19th century from the social reform movements as protest against the extremely repressive system of the high caste Hindus, which condemned widows, even child widows, to a life of living hell. Social reformers in Bengal, Maharashtra, Punjab and the South made a virulent attack on the Brahmanical model of *sati* and advocated widow remarriage.⁵

Under levirate marriage, a widow has to marry her husband's younger brother, or in the absence of a younger brother, to a cousin. Jats, Gujjars, and Ahirs follow this system. Bhangis and Chamars do not have restrictions on marriage of their widows. Such marriage is not called "marriage" but *Karewa*. It is a marriage of convenience whereby society provides protection to a widow or her children and in which there is no formal marriage ceremony. The *Karewa* normally takes place after 12 months of the death of the husband on the day of the first death anniversary. At a small

community gathering, the person places bangles on the head of the widow or wraps a piece of cloth around her. After this ceremony, the widow enjoys all the rights and privileges of a married woman.⁶

A widow remarriage in Rajasthan takes place generally at night or after sunset, with a simple ceremony without much fanfare. After the marriage the widow enters her husband's home from the back door and in some cases the first thing she does is to go and sit near the *chakki* (wheat grinding machine) which symbolises the status of the widow. This marriage ceremony is called *karewa*, *chaddar pahnana* or *churi pahnana* which depends upon the location of the village and the local traditions. It could take the form of either placing *churris* (glass bangles) on the widow's wrist, or sometimes even a gold *nath* (nose ring) on her nose and a red sheet over her head with a rupee tied in one of its corners, before a full assembly. The distribution of *gur* (molasses) or sweets would follow this. This custom is followed to this day. Significantly, this form of remarriage is not accompanied by any kind of religious ceremony, as no woman can be customarily married, i.e. go through the ceremony of *biah* twice. The widow after *karewa* merely resumes wearing the jewels and brightly coloured clothes which she had put away on her husband's death.⁷ *Karewa*, as a rule, has always been primarily a levirate marriage in which the widow is accepted as wife by one of the younger brothers of the deceased husband; failing him, his first cousin, and so on. In fact, the persons eligible to marry a widow were not only severely restricted, but the marriage could be settled only by her late husband's family. So complete was the control over women and the question of their remarriage that it was freely admitted that the widow was often practically forced to yield to their wishes.⁸

Background of War Widows

It is proposed to examine the background of war widows before discussing the problems of widow remarriage. The aim of discussing the family background is to portray the widow's family condition, which is essential for understanding their social position and also assess their reaction to the custom of widow remarriage.

(a) **Caste Composition.** Out of 54 widows in rural Rajasthan, 32 were Jats, 10 Rajputs, seven Yadavs, three Muslims, one

Gujjar and one Kumawat. Except the Rajputs, all other castes practice the tradition of widow remarriage.

(b) **Age Composition.** Out of 54 cases, 31 widows were in the age of 15 to 25 years, 18 in the age bracket 26 to 35 years and five were in the bracket 36 to 45 years of age.

(c) **Age at Marriage.** Five widows were married at the age of 5 to 10 years, 30 got married between the age of 11 to 15 years and 19 got married at the age between 16 to 20 years.

(d) **Number of Children.** There were 11 widows who did not have a child, and were in 15 to 20 years age bracket. Eight widows had only one child each, 18 widows had two children each, 11 widows had three children each, five widows had four children each and one widow had five children.

(e) **Number of Years of Marriage.** Out of 54 cases, four widows got married only a couple of months ago. 15 widows were married for one to five years, six widows were married for six to 10 years, 10 widows were married for 11 to 15 years, 13 widows were married for 16 to 20 years and six widows remained married for 21 years and above.

A majority of the widows, 45 out of 54 cases live with their in-laws. It is sociologically very important since it also highlights the position of widows in the traditional patriarchal family system. Eight of the widows were living with their parents and only two widows were living on their own. Out of the two, one was approximately 45 years of age, with grown up children and the other a young widow (23 years) had left her in-laws fearing a forced marriage with her married brother-in-law and was living with her brother at a district where she could give better education to her children.

Only 30 per cent of the widows said that they got remarried to their brothers-in-law. The other 70 per cent of the widows replied in the negative. But when we inquired about them from villagers, neighbours and *Sarpanches* we came to know that more than 80 per cent got remarried to their brothers-in-law, or we may say 90 per cent of the young war widows got re-married through the custom of *Churi Pahanana* (balance of 10 per cent – most of them

belong to Rajput caste, who did not get married to their brothers-in-law are the dispute cases). There are two basic reasons for which they want to keep their second marriage a secret.

(a) They have a fear that after remarriage the pension might stop or in other words Government may stop their pension (But it is not true at all; the Central Government has issued an order that the pension will not be affected even if the widow gets remarried).

(b) They think the high caste and urban population in India do not approve the custom of *Churi Pahanana*. They feel shy to confirm it.

The 30 per cent of the widows who confessed that they got remarried to their brothers-in-law were of the following categories:-

(a) Five per cent got married to unmarried *Devar* (brother-in-law).

(b) 20 per cent got married to married *Devar*.

(c) Five per cent got married to married *Jeth* (husband's elder brother).

Response From Remarried Widows

Five per cent of the widows married their unmarried brother-in-law. They were very happy and the reasons they gave are as following :-

(a) It is our custom to get married to unmarried *Devar*. I was married only for a couple of months and I only stayed with my husband for a month or so. I hardly knew him. I was remarried on the 12th day after the death of my previous husband and now I am very happy. My husband will stay with me always. Gradually I am forgetting my earlier husband.

(b) My in-laws are very good people. They know my position since I am so young. Where will I go now? It is so nice of them to propose for my remarriage, my own parents also agreed to this arrangement since it is not only our tradition but

also safety and security for the young girl who has to be looked after by her in-laws.

(c) Where can I go now? I can never get the same prestige and honour any where, else, so I decided to get married to my brother-in-law.

(d) Who will look after my children unless I get married again? So I decided to get married so that my children can get the guidance and support of a father. I am happy to be married now. I have a lot of money, and so I have a very high status now in the family.

25 per cent of the widows who got married to their married *Devar* or *Jeth* have a different outlook towards widow remarriage as under :-

(a) My in-laws forced me to get married to my married brother-in-law. It is not justified and it is against our customs to do this. But we have no say, whatever my father-in-law decides, is the last word in our family. After all I have to stay in this family, how can I say 'no' to this proposal? I am just twenty years old. I have no option.

(b) My *Jeth's* wife does not talk to me. She also resents my sleeping with my *Jeth*. What can I do in this situation? My own parents are greedy and they asked me to come and stay with them. I refused. Here at least my *Jeth* will look after my property and financial transactions. I am not educated, who will take care of my property?

(c) I know it is not justified to marry *Jeth* because it is not in our custom, but I can't say 'no' to my in-laws.

On being questioned "Do you think you are forced to get married to your married brother-in-law only for money?" 100 per cent of the respondents said 'Yes'. "It was so clear from the very beginning. I do not understand much regarding money matters. If I would have not married to my brother-in-law, then the property would have gone somewhere else (in case I marry somebody outside the family) so I was forced to get married in this family."

Analysis and Findings

The norms for levirate generally are as under :-

(a) A woman, once married, belongs to the patri-fraternal contingent of her husband's paternal family.

(b) An adult of reproductive age should have a mate, so a widow of reproductive age should be given in to another man in the family.

(c) A widow should be given (by *Churi Pahanana*) to her dead husband's unmarried younger brother (*Devar*); whether he is younger or older than the widow is no consideration.

(d) Widow is never given to her dead husband's elder brother (*Jeth*), who is like her father-in-law and strict rules govern in the family (*Ghunghat*-covering of face) as far as interaction with him is concerned.

War widows have been given money by the Government. We find modification of certain norms where a widow is forced to marry her married brothers-in-law, elder or younger to her dead husband, to keep the money intact in the family structure. Their theoretical and empirical analysis have generally been based on the assumption that societies can be seen as persistent, cohesive, stable, generally integrated wholes.

Compensation to the Kargil war widow directly has changed the entire dynamics of rural families and the Kargil war widows have suddenly changed into a different social category with higher status in the family and society, and a marked increase in their self-confidence with greater economic security.

Professor N K Singhi, says that the natural differentiations are made culturally hierarchical in terms of superior-subordinate relationship. Creation of structural arrangements providing differential roles and status have perpetuated the institutionalised deprivation of women in normalcy of life-chances and made her vulnerable to exploitation, oppression and inequality. Culture has created a value system which specifically revolves around her genitals, viz., values

related to virginity, fertility, chastity, purity. Such a value-system has influenced her mode of life, her world-view, manners, aspirations and the primary institutions of marriage and family and the denial of public participation.⁹

It would be short sighted to suggest any future programme for the emancipation of Kargil war widows without taking rural social factors into account. However, awareness, adult education and counseling programmes by the Government and non-Government organisations should be organised for widows for a better and purposeful future.

Conclusion

To conclude, the author is aware that provisions of the list of 'Policy Recommendation' comes close to implying a pessimistic prediction; probably, the Kargil war widows will not get the help they need. It is possible that there will be some marginal improvement in their lives. It is possible that the voices of these war widows, who are wives of national heroes, are heard. But to ask for this is to ask for a kind of altruism. The trouble with altruism is that it is so rare that we should not trust some self confident group to enforce it on others, since it needs the understanding and perspectives of social scientists.

References

1. W E Purser and H C Fanshawe, *Report on the Revised Land Settlement*, Rohtak District, 1873-79 (Lahore, 1880).
2. The colonial interest in strengthening the hold of the existing peasant society over land, which the claims of widows (for partitioning their land holding and seeking permission to marry men outside the family) threatened to disrupt both economically and socio-politically, coincided with the interests of the landowning classes in Punjab-Haryana. Therefore, the colonial state, which selectively adopted customs and made them legally enforceable, was blatant in its attempts to encourage widow remarriage through administrative and judicial agencies. For a full discussion see Prem Chowdhry, 'Customs in a Peasant Economy: Women in Colonial Haryana', in Kumkum Sangari and Sudesh Vaid, eds., *Recasting Women: Essays in Colonial History* (New Delhi, 1989), pp. 302-33. The post-colonial state has also reinforced the system of *karewa*, though indirectly and unintendedly,

through present day legislation, such as inheritance law, or more directly through executive and administrative directives of later day pension and award claims. For details, see Prem Chowdhry, 'Conjugality, Law and State: Inheritance Rights as Pivot of Control in Northern India', *National Law School Journal*, Bangalore, vol. I, 1993, pp. 95-116.

3. *Principles of Hindu and Mohammadan Law* (London, 1862), p. 62.
4. See Alienation of Land Bill of 1900, *Gazetteer of India*, 1899, Part v.
5. Prem Chowdhry, 'Popular Perceptions of Widow-remarriage in Haryana: Past and Present, From The Seams of History'. *Essay on Indian Woman*. Edited by Bharati Ray, (New Delhi : Oxford University Press, 1995), p. 41.
6. S N Agawal, Remarriage Rates in Some Delhi Villages. *Medical Digest*, Vol. 30, No. 9, 1969, pp. 551-552.
7. Joseph, Rohtak Customary Law, p. 46.
8. Joseph, Rohtak Customary Law, p. 46.
9. N K Singhi, 'Gender Inequality A Theoretical Construct', *Prashasnika*, Volume XVIII, Number 1-4, 1989, p. 188).

ERRATA : USI Journal January-March 2003, Vol CXXXIII, No. 551.

Refer the short review of book *The World Within War : America's Combat Experience in World War II* by Gerald F Linderman. Page 155. The sentence "...wryly wrote SLA Marshal in his remarkably insightful book on combat at grass-root level, which he aptly termed "Men Against Fire" should read as "...wryly wrote Ernest Hemingway in his remarkably insightful book on combat at grass-root level, which he aptly termed "Men at War."

The error is regretted.

A Facet of Naval Philately and Naval Submarines

Commodore A K Dhlr (Retd)

Introduction

In Great Britain, a small piece of gummed paper was introduced on 6 May 1840, as a token and proof of payment of tax towards dispatch of letters. It was used in addition to pre-paid envelopes that had already existed. This bit of paper was subsequently called the *Penny Black* – the revolutionary postage stamp for the modern world. In India, the postal system and postage stamps were introduced on 1 October 1854, although two years earlier, the Scinde Dawk (a forerunner of the Indian stamps) had already been used for similar purposes.

The introduction of India postage stamps occurred during the reign of Queen Victoria. Post Offices Act 1854 was issued and brought into force. The management of the postage charged on letters by Her Majesty's Post Master General (PMG), under the name of Steam postage, became easier. At this time, Steam Departments (re-designated as Department of Foreign Exchange, in 1870) were constituted in all General Post Offices (GPOs) in India to deal with 'Steam letters', where additional charges were applicable over normal postal tariff. These letters were mostly foreign mail, though they included mail between our own ports. Her Majesty's soldiers and sailors were the pampered lot. Letters written by or addressed to sailors or soldiers of Her Majesty's Navy or Army were termed as soldier's letters. These letters for Great Britain as well as between two ports in British India, were charged one penny or nine pies provided the postage was prepaid. Postal envelopes costing nine pies, and carrying a red embossed impression of the Queen's head, were especially overprinted for use as "SOLDIERS' AND SEAMEN'S ENVELOPE" (Figure 1).

Commodore A K Dhlr designed eight postage stamps and a number of first day covers, special covers and cancellations related to the Indian Navy.

Journal of the United Service Institution of India, Vol. CXXXIII, No. 552, April-June 2003.

This is probably the oldest known artefact in the philatelic world related to our navy, having been printed in 1854 and onwards.

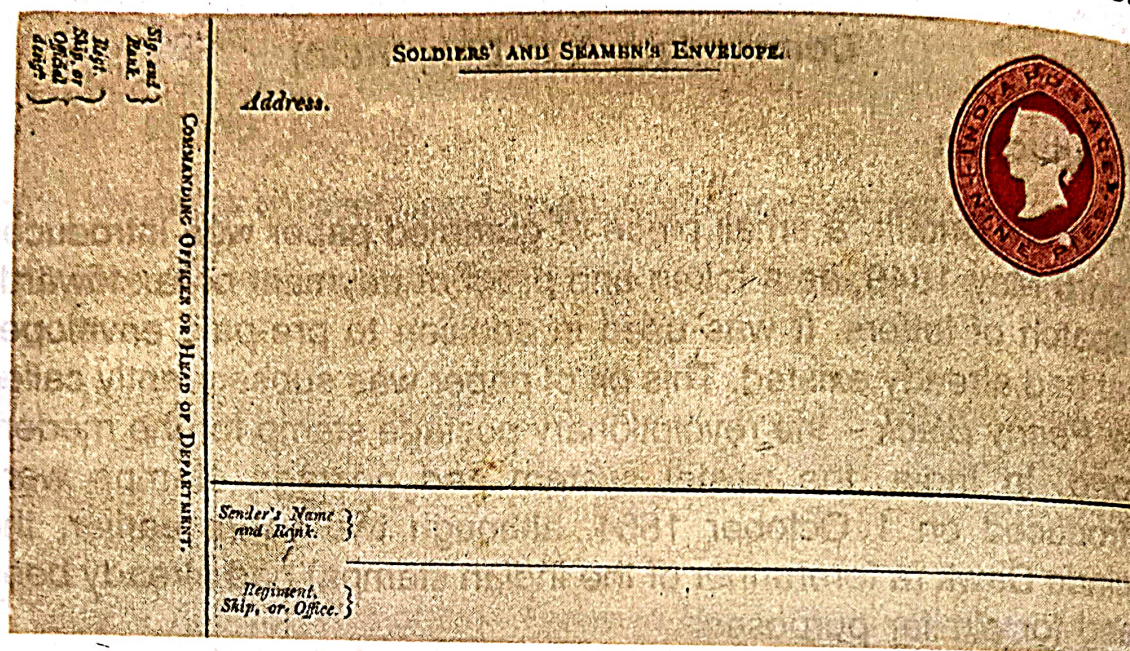


Figure 1

Pigeon Mail

The conveying of messages through pigeons from sea to shore has been recorded in our medieval history, as also during the regimes of Mogul emperors and Maratha kings. Therefore, it is interesting to note that our navy also considered it during the Second World War. This had happened consequent to an idea that was conceived by Vice Admiral Sir Herbert Fitzherbert, the then Flag Officer Commanding Royal Indian Navy, to establish a 'Pigeon Mail Service' exclusively for the naval forces. On 6 April 1941, 250 pigeons were released with copies of a special message from the Governor of Bombay to the Flag Officer Commanding Royal Indian Navy, contained in pre-cancelled envelopes from Kalyan to Bombay. These 2000 envelopes were subsequently sold to the public at a cost of Rs. 2/- each to raise funds for donations to the Royal Indian Navy War Purposes Fund. This special cancellation was subsequently depicted on a First Day Cover, which was released on 3 November 1989, to commemorate the Pigeon Post. It was unfortunate that its historical background was not mentioned in the brochure issued by the Department of Post. The sketch drawn on the stamp on this occasion (1989) was also a poor representation of a naval officer.

Defence Theme

The initial set of postage stamps on 'defence' was issued to commemorate the 'Victory' upon the culmination of the Second World War. Major contributions were made by the three Services of the Indian Armed Forces. A set of four stamps, in different colours and denominations, was issued on 2 January 1946 for this occasion (Figure 2). During the post-independence era, two commemorative stamps were issued on 30 April 1958, to mark the Silver Jubilee of the Indian Air Force. Subsequently, two more commemorative stamps were issued titled 'They Defend', on Independence Day in 1963 (Figure 3). The representation of the Indian Navy was conspicuously missing from the commemorative stamps.



Figure 2

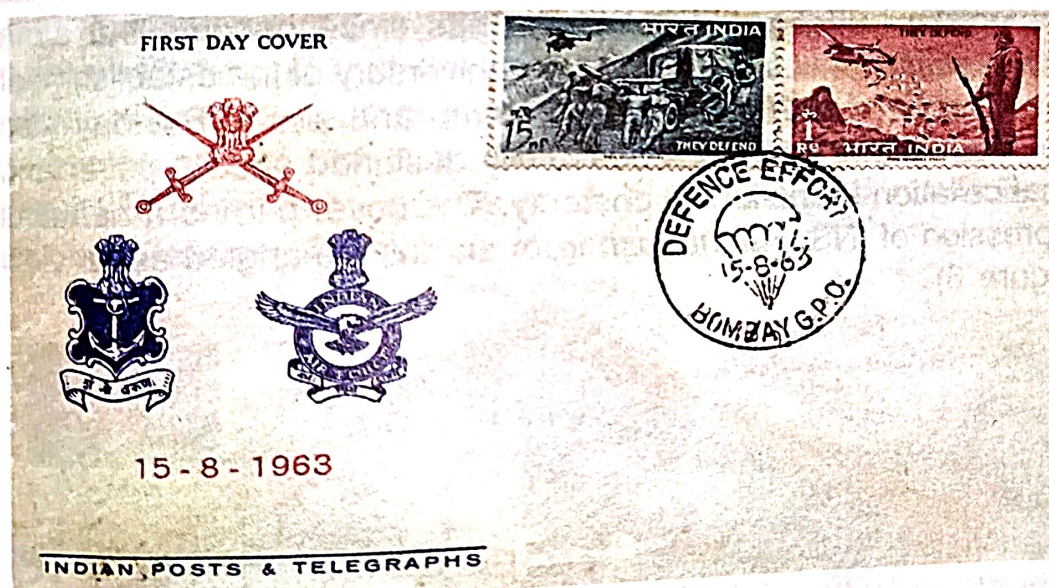


Figure 3

Indian Navy on Stamp

The Indian Navy was initially depicted on a postage stamp along with other two Services. Indian Posts and Telegraphs Department (now, Department of Post) had issued a single coloured commemorative stamp depicting silhouette of INS *Mysore* (Figure 4), besides Gnats representing the Indian Air Force, and a soldier in battle dress for the Indian Army. The stamp was released

on 26 January 1966, to propagate the theme "JAI JAWAN" as coined by our late Prime Minister, Shri Lal Bahadur Shastri. Thereafter, a single-coloured stamp on INS *Nilgiri* followed on 15 December 1968, (then, the Navy Day) to commemorate commissioning of the first indigenously built modern frigate earlier that year (Figure 5). This was the first stamp to commemorate an event of the Indian Navy, exclusively.



Figure 4

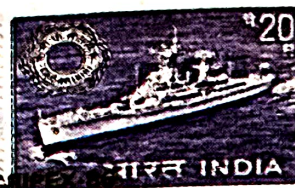


Figure 5

Visakhapatnam (Submarine Headquarters) and INS *Virbahu*

The Submarine Headquarters is based at Visakhapatnam. INS *Virbahu* was inaugurated by the Defence Minister, Shri Jagjivan Ram on 19 May 1971. This establishment was commissioned to provide shore support to the submarine squadrons - both technical and logistic in nature. INS *Virbahu* has since become the alma mater to our submariners. The 11th anniversary of the establishment was celebrated with extraordinary pomp and show. The day also witnessed the release of a beautifully designed special cover and a cancellation for historical posterity. The cover carried a beautiful impression of INS *Sindhugosh* from an oblique-angled aerial view (Figure 6).



Figure 6

Indo-Pak War 1971

In 1971, India had to face a new challenge arising from the influx of refugees from East Pakistan. This figure crossed 10 million during latter half of the year. It was a big drain on our exchequer to support them. The Indian government had to find resources to raise additional funds. Provisional issues were made by overprinting "REFUGEE RELIEF" on 5 paise denomination stamps of definitive series, as well as on service and revenue stamps. Six variants of such definitive stamps exist. Later, in 1971, an exclusive stamp on this title was released, depicting refugees carrying all that they could on their person (Figure 7). An exclusive stamp was also released in 5 paise denomination for service postal use. Later that year, the world was witness to Indo-Pak war of 1971, in which INS *Kursura* and INS *Karanj* participated in the western front whereas INS *Khanderi* patrolled the expanse of the Bay of Bengal. By 10 November 1971, our front-line squadrons, *INAS 310* (Alizes) and *INAS 300* (Seahawks), commanded by Lieutenant Commanders RD Dhir and SK Gupta respectively, had strafed and disabled all major ports of the enemy on the eastern front besides damaging and destroying a large number of their ships. These aircraft had operated from INS *Vikrant*, in the Bay of Bengal. The presence of our submarines with our fleet had the desired results to deprive the enemy much of his offensive power at sea besides deterring his friends to come to his aid.



Figure 7

Naval Philatelic Society

Philately has a cumulative effect on publicity drives. A group of young philatelists got together in October 1979 and founded 'Naval Philatelic Society' (NPS) to popularise the hobby of Maritime Philately, as also to promote Maritime History, through this media. Immediately thereafter, the society held its first Philatelic Exhibition, short titled NAVPHILEX-79. It was conducted along with the Navy Week celebrations at Visakhapatnam, that was scheduled for three days, each day being dedicated to an 'arm' of our Navy - Surface

Forces Day, Submarine Arm Day' and Naval Aviation Day. Thus, the cover and the cancellation depicting INS *Vela* released on 30 November 1979, during NAVPHILEX-79 introduced our silent arm (the submarine arm) to the philatelic world, just short of 12 years after the arm was formed (Figure 8).

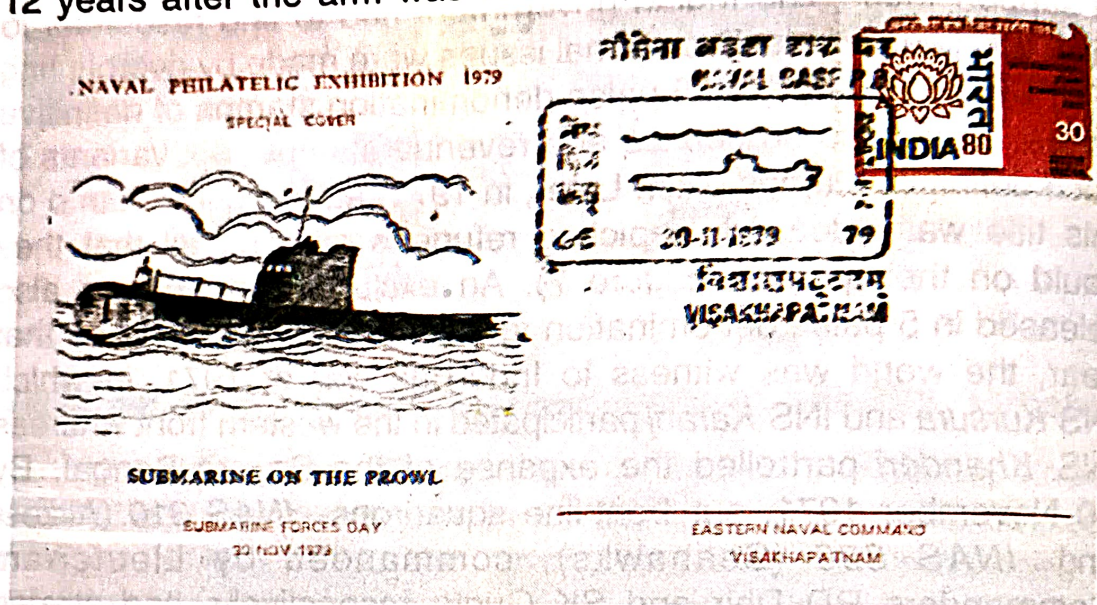


Figure 8

Submarine Day and Special Cancellation Under Water

INS *Kalvari*, the first submarine of our Navy, was inducted into the service on 8 December 1967. Within the next two years and ten days, three more submarines (including INS *Kursura*) of the same class (i641 project, and later modified to i641k) were inducted, to form the initial (8 SS) submarine squadron. Obviously, the date has special significance to our Navy and it has since been designated as the 'Submarine-Arm Day' or just 'Submarine Day'. On 8 December 1982, an exclusive function was held to commemorate the fifteenth anniversary of the submarine-arm, onboard INS *Kalvari*, whilst it was dived off the coast at Visakhapatnam. A temporary Post Office was established onboard to enable the Flag Officer Commanding in Chief (FOC-in-C) (EAST), Vice Admiral MK Roy, to release a special cover and cancellation with the silhouette of the submarine. Three interesting aspects of this function were : The Chief Guest, Vice Admiral MK Roy, was the first Commanding Officer of INAS 310, when it was commissioned in France. Incidentally, this squadron, consisting of anti-submarine aircraft (Alize), had boarded INS *Vikrant* off Malta, in 1961. Secondly, a function of this kind was never heard of,

being conducted under water, onboard a dived war vessel. This could well be the first in the world! And lastly, the entourage of the journalists covering the function onboard, consisted of Ms Mayachar, who had the distinction of being the first lady to be onboard an Indian submarine, out at sea, and whilst dived.

Sixth Fleet Review and INS Vela

The Review of a Nation's fleet of warships, by the Head of a State, is a ceremonial occasion, which originated centuries ago. Such ceremonies bring into focus the growth of a fleet over the years and enhance a feeling of national security. The President of India, being the Supreme Commander of the Armed Forces, normally reviews the Fleet of the Republic of India at least once during his tenure in office. The Sixth Review of our fleet was conducted on 12 February 1984 off Gateway of India, at Bombay. The President, Giani Zail Singh, released the only se-tenant (consisting of four stamps joined together to complete its design) on 'defence' during a brisk function on the South Breakwater, in the Naval Dockyard (Figure 9). One of them depicted a submarine exclusively, and it is the only Indian postage stamp to do so. The stamp depicted INS *Vela*, the fifth submarine that had joined our fleet 10 years earlier. Its pennant number (S 40) can be viewed through a magnifying glass if brought over the stamp. The designer had encrypted this, being her commissioning Electrical Officer. Interestingly and subsequently, Philatelic Congress of India judged the se-tenant as the best designed Indian postage stamp for 1984.

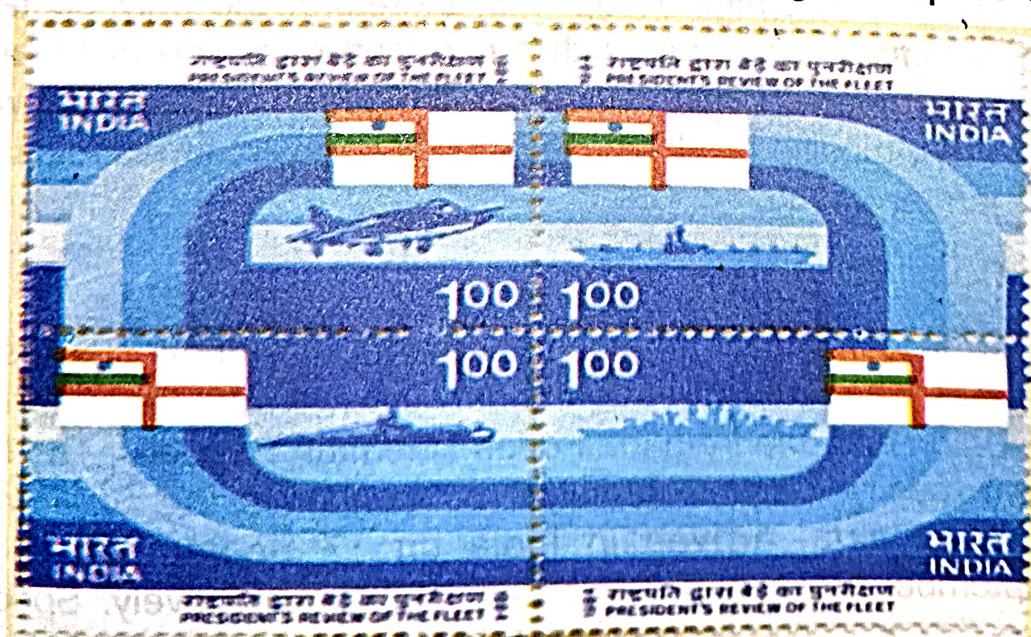


Figure 9

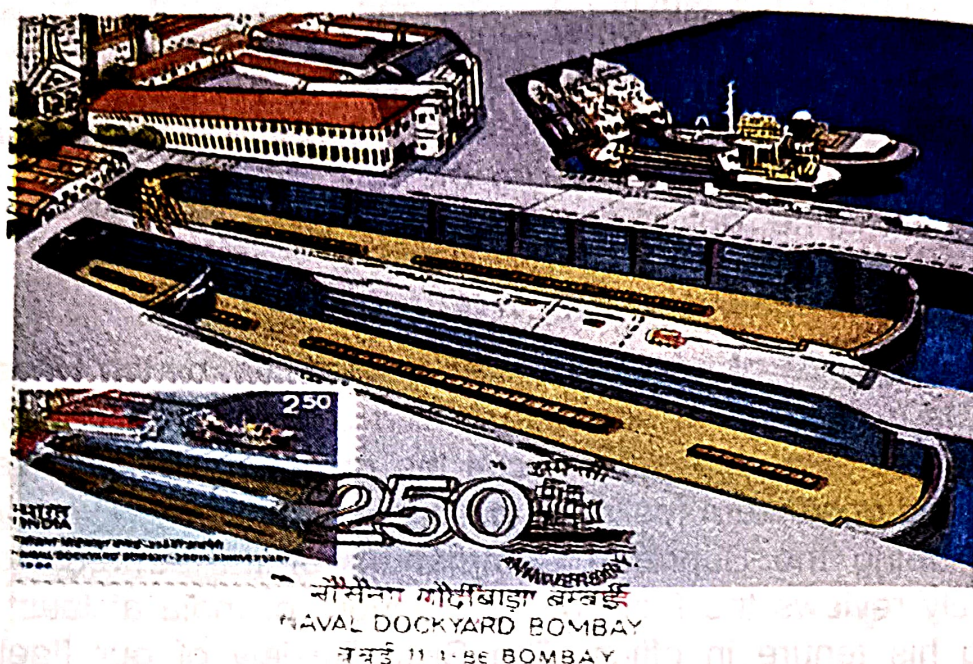


Figure 10

250th Anniversary of Naval Dockyard (Bombay) (ND (B)) and Kursura

The Maritime Philatelic Exhibition-1986 (MARIPEX-86) was conducted at the Prince of Wales Museum, Bombay. The Governor of Maharashtra inaugurated this exhibition along with the release of a stamp to commemorate the 250th Anniversary of the Naval Dockyard, on 11 January 1986. Against a request by the stamp designer, the Minister of Communication had generously given his consent to face value the stamp at Rs. 2.50 to coincide with the '250th Anniversary' (Figure 10). It is, therefore, the only postage stamp of India to be issued with a non-tariff rate. The pictorial of *Kursura*, the dog-shark adopted for the fourth submarine, was selected duly modified for the cover and cancellation. It was released on 28 January 1986.

Home-Coming

With the growth of the submarine-arm, three new classes of submarines were inducted into the service: two from the erstwhile Soviet Union and one from the Federal German Republic. The first of their respective classes, namely INS *Sindhugosh*, INS *Shishumar* and INS *Chakra*, arrived in India on 17 September 1986, 23 September 1986, and 3 February 1988, respectively. Special

cancellations were released on the first two occasions to commemorate their homecoming (Figures 11 and 12). Subsequently, on the occasion of the 20th anniversary of the 'Submarine-Arm', a special cancellation was released on 21 December 1987. The cancellation had adopted the logo for the celebrations, whereas the cover had depicted INS *Sindhughosh* (Figure 13).

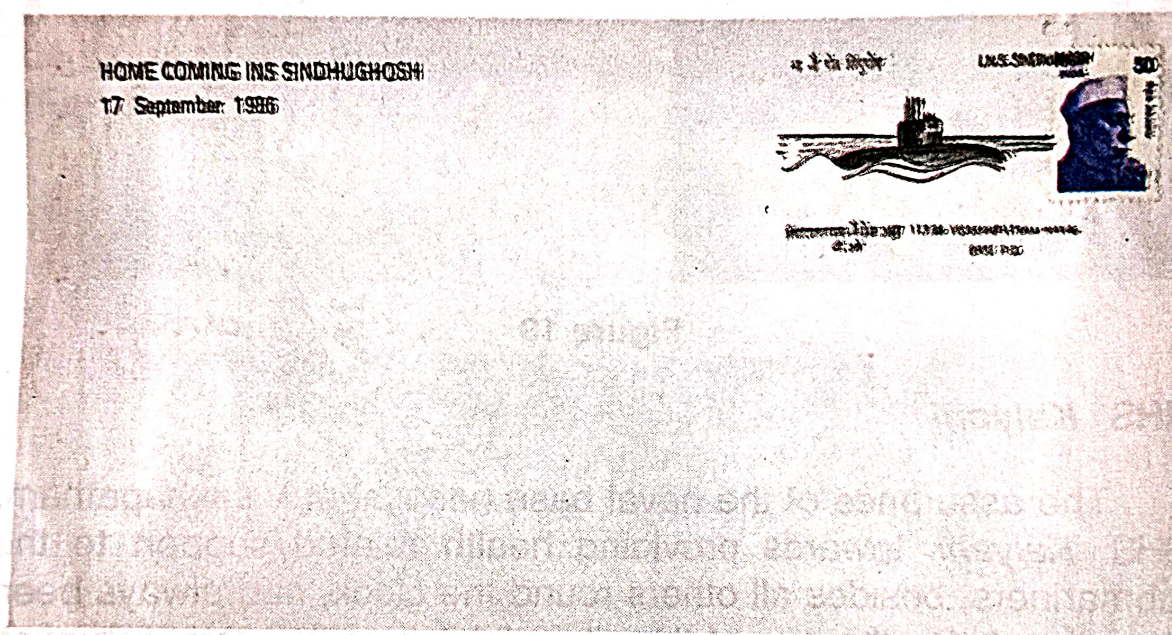


Figure 11

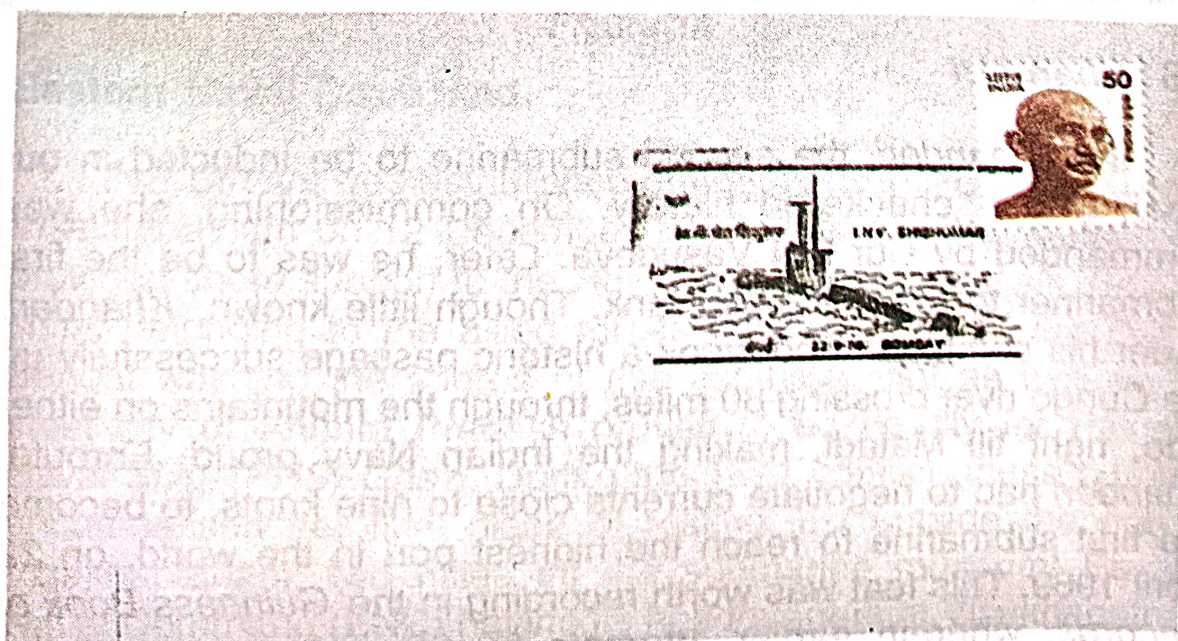


Figure 12



Figure 13

INHS *Kalyani*

The assurance of the naval base hospital at Visakhapatnam, INHS *Kalyani*, towards providing health related support to the submariners, besides all others round the clock, had always been exceptional. On the eve of the silver jubilee of the establishment, a beautiful multi-coloured special cover and an impressive cancellation, depicting the crest of the shore establishment, were released on 18 May 1987.

INS *Khanderi*

INS *Khanderi*, the second submarine to be inducted in our navy, had a checkered history. On commissioning, she was commanded by Cdr MN Vasudeva. Later, he was to be the first submariner to reach the flag rank. Though little known, *Khanderi*, under his command undertook a historic passage successfully up the Congo river crossing 80 miles, through the mountains on either side, right till Matadi, making the Indian Navy proud. Enroute, *Khanderi* had to negotiate currents close to nine knots, to become the first submarine to reach the highest port in the world, on 22 April 1969. This feat was worth recording in the *Guinness Book of Records*, wherein earlier attempts by the submarines of the US Navy, the Royal Navy and a few others including that from Holland had failed. This happened during her maiden passage to

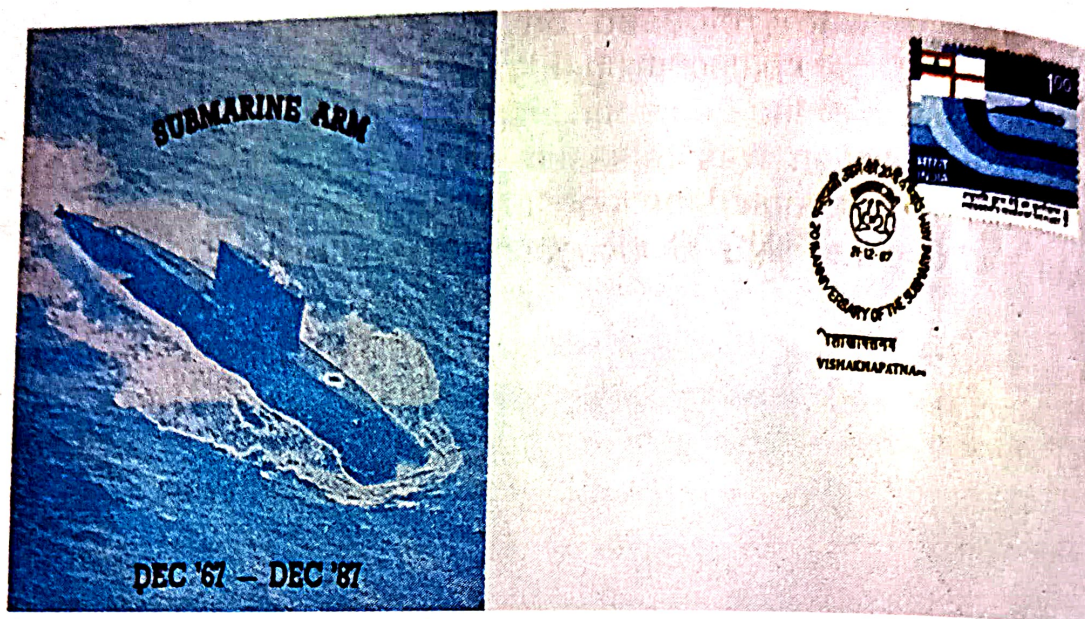


Figure 13

INHS *Kalyani*

The assurance of the naval base hospital at Visakhapatnam, INHS *Kalyani*, towards providing health related support to the submariners, besides all others round the clock, had always been exceptional. On the eve of the silver jubilee of the establishment, a beautiful multi-coloured special cover and an impressive cancellation, depicting the crest of the shore establishment, were released on 18 May 1987.

INS *Khanderi*

INS *Khanderi*, the second submarine to be inducted in our navy, had a checkered history. On commissioning, she was commanded by Cdr MN Vasudeva. Later, he was to be the first submariner to reach the flag rank. Though little known, *Khanderi*, under his command undertook a historic passage successfully up the Congo river crossing 80 miles, through the mountains on either side, right till Matadi, making the Indian Navy proud. Enroute, *Khanderi* had to negotiate currents close to nine knots, to become the first submarine to reach the highest port in the world, on 22 April 1969. This feat was worth recording in the *Guinness Book of Records*, wherein earlier attempts by the submarines of the US Navy, the Royal Navy and a few others including that from Holland had failed. This happened during her maiden passage to

India, while sailing around the Cape of Good Hope. Later, she played her role well in the Bay of Bengal, during Indo-Pak War, in 1971, as mentioned earlier. *Khanderi* was also the first to undergo medium refit in India (at Naval Dockyard, Visakhapatnam). Numerous pioneers of our 'silent-arm' had the honour of serving onboard this beautiful vessel. She was decommissioned on 18 October 1989, after completing almost 20 years of glorious service. A special cover was informally issued on that day at New Delhi, depicting her 'crest'. No special cancellation, however, was released (Figure 14).

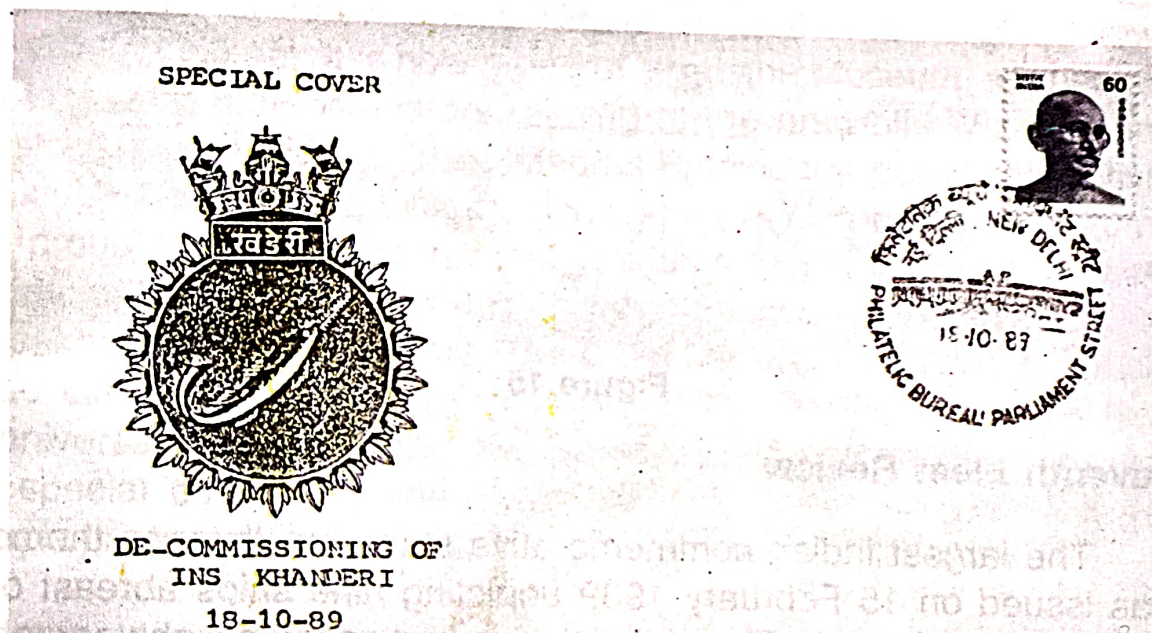


Figure 14

Eastern Naval Command

INS *Circars* was established during the Second World War at Visakhapatnam on 12 December 1939. This naval establishment provided shore support to the Royal Indian Naval vessels, besides ships belonging to the allied forces. The currents of the Bay of Bengal washing the shores of this establishment as well as the steel city of Andhra Pradesh proved to be deadly for Pakistan Naval Ship (PNS) *Ghazi*. During the 1971 conflict, these currents encompassed her final place of resting just outside the port of Visakhapatnam, two miles off the submarine museum! Eastern Naval Command (ENC) having its headquarters at Visakhapatnam also developed impressively over the years. The Command had provided active logistic support to the Indian Peace Keeping Force

at Sri Lanka till March 1990. A special cancellation was released on the eve of Golden Jubilee of the ENC, depicting the three arms of the Navy including frontal silhouette of a submarine, on 12 December 1989 (Figure 15).

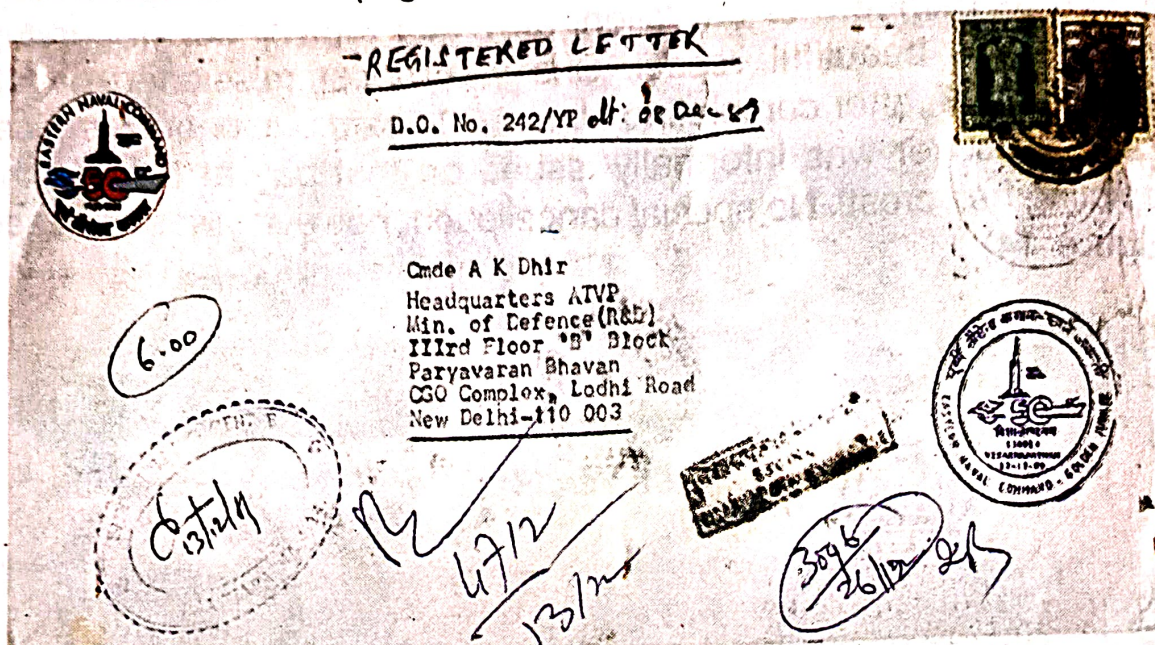


Figure 15

Seventh Fleet Review

The largest Indian commemorative stamp on defence theme was issued on 15 February 1989 depicting nine ships abreast of each other (Figure 16). The stamp design had adopted a photograph

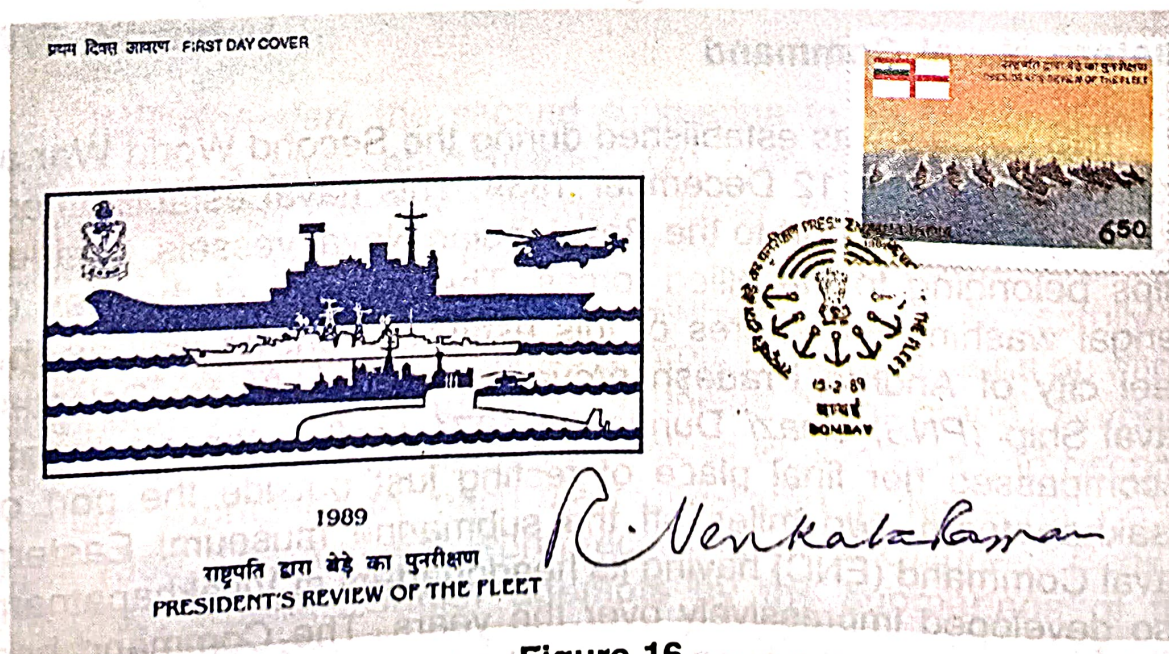


Figure 16

(taken by Cdr DS Brar, NM) of this unique and complex formation which was led by earlier Flag Officer Commanding, Western Fleet, Rear Admiral Subash Chopra, PVSM, AVSM, NM. No submarine was depicted on this stamp. However, the First Day Cover carried an impression of a SSK (submarine to submarine killer) submarine alongwith other major vessels and helicopters. In addition, the lowest among the three arcs in the cancellation represented the Submarine-Arm.

Corporation Museum

The 'fin' of INS *Kalvari* is on display at the 'Dutch Bungalow' at Visakhapatnam. It is now a part of Visakaha Museum, a museum of local and regional history relating to the erstwhile 'Vizapatnam District', the largest district of 'Madras Presidency' during the British colonial period. The museum, also known as Corporation Museum, is proud to have this national maritime inheritance as its first participatory outdoor exhibit for the benefit of the citizens of Visakhapatnam and visitors. The Chief Minister of Andhra Pradesh had inaugurated it, on 8 December 1999. On the eve of its first anniversary of installation, the Corporation Museum had released a special cover, and the Department of Post had provided an appropriate pictorial cancellation for the occasion (Figure 17).

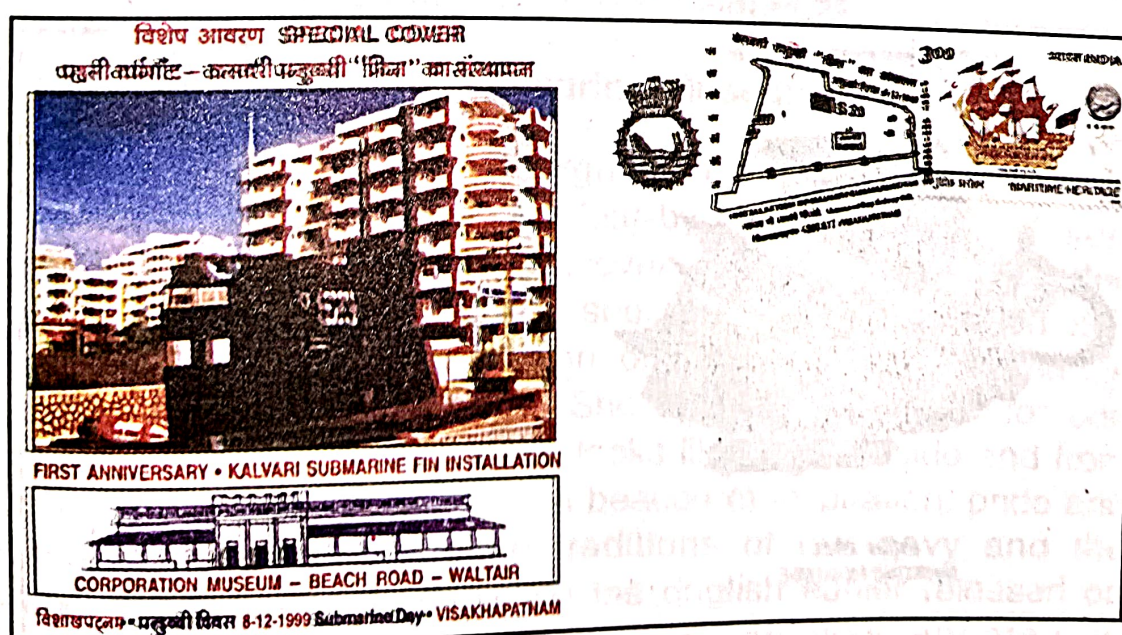


Figure 17

Maritime Heritage and INS *Satavahana*

With the acquisition of the latest submarines and ships during late 1960s and early 1970s from the erstwhile Soviet Union, the need to establish an Integrated Type Training School was found to be inevitable. It was inaugurated at Visakhapatnam, on 11 March 1974. However, it was commissioned as *INS Satavahana* on 21 December, the same year. It is of interest to know that the name represents the dynasty that had ruled a major portion of our country for over four centuries, starting from about 230 BC. They were great seafarers, and had established trade links with Mesopotamia and beyond on the west, besides sending missionaries to the Far East. The crest of this training establishment adopted the face of the famous Satavahana coin with a double mast boat. The same had been reproduced on the set of two 'Maritime Heritage' stamps that were released on the 5 April 1999. Both the stamps also carried the motto of our navy, being an excerpt from the *Rig-Veda* (Figure 18). On this occasion, the First Day Cover carried a sculpture of a sailing boat from the panel of Borobadur temple in Java. The cancellation, however, was a reproduction of a scratch impression of a sea faring boat with its prominent rudder, lifted from a pot shard discovered at Mohenjo-Daro (circa 3000 BC).

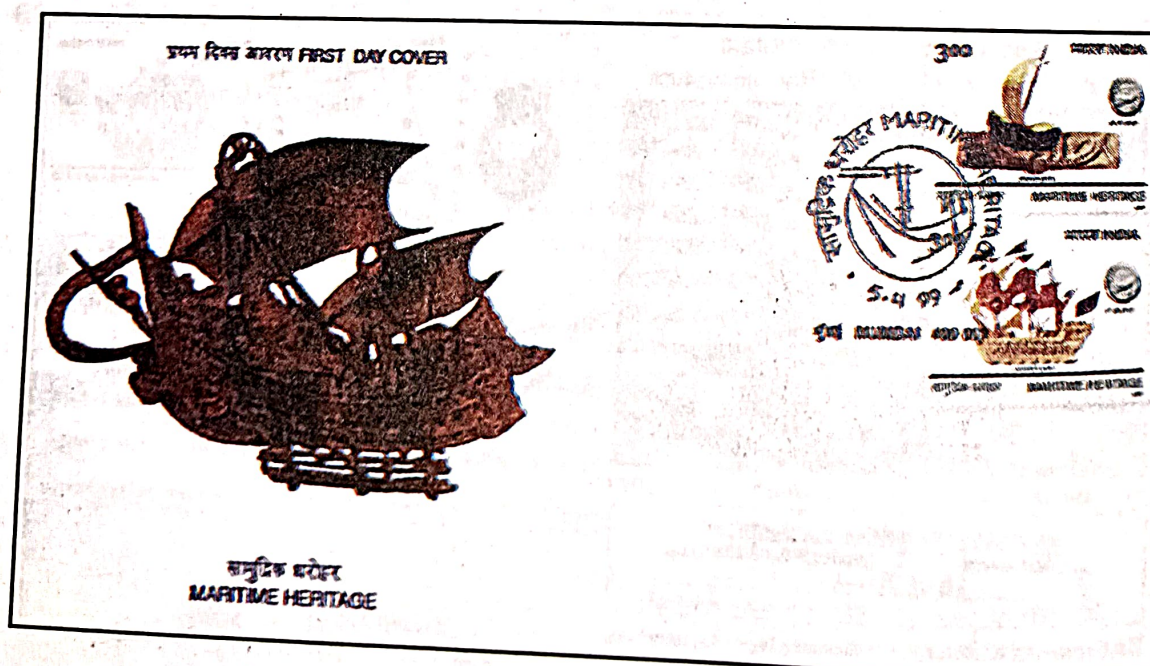


Figure 18

International Fleet Review-2001

The above-mentioned scratch impression of the boat was subsequently, adopted as the logo for the International Fleet Review – 2001 with the motto 'Bridges of Friendship'. It is also represented in one of the four commemorative stamps released on the occasion with international tariff of Rs. 15 (Figure 19). The other three stamps have Rs. 3 each as face value, representing Pal and Galbat of a bygone era of Maratha Navy, and sailing vessel *Tarangini* presently in use with our navy (Figures 20 to 22). The cancellation had adopted the naval crest whereas the First Day Cover carried a graphic representation of participation of over 30 foreign navies in the review.



Figure 19



Figure 20



Figure 21



Figure 22

First South East Asian Submarine Museum

The National Ship Design and Research Centre at Visakhapatnam achieved a rare feat by hauling up INS *Kursura* with all her equipment onboard, over the sandy Rama Krishna Beach. On 27 February 2001, she was decommissioned and converted to hold the distinction of being the first submarine museum on this sub-continent. She stands majestically for one and all to see what a submarine looks like from outside and from within. She is there to serve as a beacon of inspiration, pride and continues to foster maritime traditions of our navy and the nation. A special cover depicting the dogfish earlier released on 28 January 1986, during MARIPEX-86 was adopted to commemorate the occasion.

Conclusion

Philately is a wonderful multi-facet media that appeals to a layman and those interested, alike. It is indeed a wonderful hobby, and its resources and qualities are there to be tapped, probably, by each generation among the submariners too! It also serves as a record that can preserve the submarine history in most unusual way, as demonstrated in this article.

Recent USI Publications

1. **USI National Security Series 2002**
(New Delhi : Knowledge World, 2003) Rs. 495.00
2. **USI-Seminar held at Chandigarh**
Security Challenges of India in the
Regional Context with Special Reference
to Terrorism-Prognosis and Response
(A USI Publication, 2002) Rs. 100.00
3. **Environmental Security : Internal and**
External Dimensions and Response
Col PK Gautam (Retd)
(New Delhi : Knowledge World, 2003) Rs. 495.00
4. **Space Warfare and Military Strategy**
Brig A K Lal
(New Delhi : Ocean Books, 2003) Rs. 300.00

Letter to the Editor

Dear Sir,

Please refer to the article "40th Anniversary of the Sino-Indian Conflict: A Historical Perspective" by Shri Arvinder Singh in the *USI Journal*, Vol CXXXIII, No 551, Jan-Mar 2003 issue.

I wish to bring out the importance that must be given to the views of the field commanders. During Op DESERT STORM the date of 'D' Day was changed twice on the advice of Lt Gen Norman Schwarzkopf and each time the Chairman JCS General Colin Powell had to go to Defence Secretary Cheney, who was reluctant to go the President again and again. In his book *My American Journey* General Powell has written "one of my fundamental operating premise is that the commander in the field is always right and the rear echelon is wrong, unless proved otherwise. The field commander is on the scene, feeling the terrain, directing the troops, facing and judging the enemy. I therefore advised Cheney to accept Norman's recommendation."

The example to the contrary is provided by the 1962 operation in the Tawang Sector, named *Op LEGHORN*. Shri Arvinder Singh writes "Despite feedback from formations on the ground about inadequacies, New Delhi issued orders to evict the Chinese". The advice of commanders at brigade, division and corps level was given scant value. I was with Brig JP Dalvi as Signal Officer of 7 Infantry Brigade, the first formation to face the Chinese onslaught in October 1962. He has written in his book *The Himalyan Blunder* "By the end of September there was clearly a divergence of opinion between the policy makers in Delhi and the local formation commanders. There was a rift between the Brass and the Boot."

The result of ignoring the views of the field commanders soon became a national shame. Hope we learn for the future.

Brigadier Lakshman Singh, VSM (Retd)

Bravest Of The Brave*

Squadron Leader Rana TS Chhina (Retd)**

Over centuries, soldiers have carved out a niche for themselves in the conduct of human affairs. Recognising this, every nation has devised ways and means of acknowledging the contribution of its soldiers to society, particularly with regards to their services in wars waged by the State. 'Glory to the Dead and Honour to the Brave' is a popular refrain freely used to express public sentiment at the successful conclusion of most conflicts. Such sentiment is then translated into tangible symbols of recognition in the form of war memorials, decorations and medals. In India, while we have an established system dealing with the latter, the former aspect is sadly lacking, and over the years has been the subject of many fervent and impassioned appeals from retired officers. Appeals that, it is sad to note, have fallen on the deaf ears of official apathy! In this book, the author Major General Ian Cardozo, covers both these aspects with sensitivity and aplomb.

As the name suggests, the book deals with the award of independent India's highest combat gallantry award, the Param Vir Chakra (PVC). That the exclusivity of the country's highest reward for valour in battle has been zealously maintained is obvious from the fact that only 21 awards of the medal have been made in the numerous conflicts fought in the 56 years since India gained independence. While there have been a number of volumes published on the PVC, this book stands apart for its unique treatment of the subject on a variety of accounts. To begin with, it is the first and only book on the topic to be written by a professional soldier. The author is a committed and dedicated regimental officer, and this shows in his handling of the subject. Unlike past attempts, which are largely reduced to potted reproductions of the official citations published in the Gazette of India, this book's greatest

*Param Vir: Our Heroes in Battle. By Major General Ian Cardozo (New Delhi : Roli Books, 2003), pp. xif. 226, Rs. 295.00, ISBN 81-7436-262-2.

**Squadron Leader Rana TS Chhina is with the USI Centre for Armed Forces Historical Research.

Journal of the United Service Institution of India, Vol. CXXXIII, No. 552, April-June 2003.

strength is that it treats the recipients as individuals and not as mere disembodied entities, or cogs in a faceless war machine.

The introductory section deals with various aspects including the evolution and development of gallantry awards in India in general, and the PVC in particular. Little known and fascinating facts such as background of the designer of the decoration, the Swiss-born Shrimati Savitri Khanolkar, are included. Actual awards are arranged by campaign in a chronological sequence, covering the Jammu and Kashmir Operations 1947-48, the Sino-Indian Conflict 1962, the Indo-Pak Wars of 1965 and 1971, Kargil 1999 and the UN and Siachen operations. Each award is put into context by a brief background of the campaign or operation in which the action took place. This is followed by a description of the specific unit action that led to the award. For the sake of purists, the official citation is also reproduced. A detailed biographical sketch rounds off each section. In many cases these sketches break new ground as the author has not confined himself to the dry details of official handouts, but by painstaking research and personal interviews with surviving recipients, their next-of-kin or comrades-in-arms, has brought to light many hitherto unknown details and snippets of information which, but for his dedicated effort, would never have been recorded and with the passage of time, would have slipped from the sight and memories of men. Most poignant among these is the anecdote concerning the meeting between Brigadier ML Khetarpal, the father of the late Second Lieutenant Arun Khetarpal, PVC (Posthumous) of the Poona Horse and Brigadier KM Naser, 13 Lancers, Pakistan Army, at whose hands the gallant young officer met his death on the field of battle. Poona Horse and 13 Lancers were once both part of the Army of the Bombay Presidency, but in December 1971 they faced each other as part of the opposing armies of India and Pakistan fighting for supremacy at the Battle of Basantar in the Shakargarh Sector. In the fierce struggle that raged, Arun Khetarpal was all that stood between a crucial enemy counter-attack and the Indian positions. He stemmed the tide of the enemy armour but paid the price of facing overwhelming odds with his own life. The author chronicles the story of the meeting between the two Brigadiers with characteristic eloquence and sensitivity. He also manages to set the record

straight in respect of the posthumous award given to the late Lieutenant-Colonel Mohammad Akram Raja, CO 35 Frontier Force, Pakistan Army, on the basis of the citation written by then Lieutenant-Colonel Ved Airy, CO 3 Grenadiers, Indian Army, for gallantry in the Battle of Jarpal, the same action for which Major Hoshiar Singh was awarded the PVC.

The illustrations are largely confined to black and white likenesses of each of the recipients. The two photographs showing the actual obverse and reverse of the decoration are unfortunately grainy and indistinct. Supplementary information relative to the award is reproduced in a number of annexures to the main text. These include a list of Indian recipients of the Victoria Cross, as well as the remarkable story of Subedar Kishenbir Nagarkoti, 1-5 Gorkha Rifles (Frontier Force), four time recipient of the Indian Order of Merit, being the approximate equivalent of having been awarded the VC/PVC with three bars!

The book though well produced, sadly and inexcusably, suffers from the lack of an index. In addition, the designer of the dust-jacket has regrettably used artistic licence to change the colour of both the medal and the ribbon from which it is suspended. Medal ribbons are both symbolic and sacrosanct, a fact little understood by even the larger sections of the educated civil populace in India. It is precisely this ignorance that it is hoped this book will redress in some measure.

Otherwise, the book is extremely well written and makes for an easy and gripping read. The author's style of writing carries the stamp of conviction and allows his deep involvement with the subject to show through. This book is not a mere recounting of dry facts but is a well laid out and extremely well written account of our nation's war heroes, truly the 'bravest of the brave'. Major General Cardozo is to be congratulated for having produced what will be 'THE' book on the Param Vir Chakra for many years to come. It is a must for all military libraries, and is strongly recommended for inclusion in general libraries, particularly at the school and college levels.

Jammu and Kashmir War (1947-1948): Political and Military Perspective*

Major General D K Palit, VrC (Retd)**

The astonishing thing about the first Kashmir war was that the Indian Army succeeded to the extent it did in occupying and holding the Valley, the Jammu region and Punch, despite the concerted scheming of the British Government, the British Governor General of India, the two British Commanders-in-Chief in Delhi and Karachi, the British Chief of the Indian Air Force and a whole range of British officers in places such as Gilgit to help Pakistan establish its military presence in the area. British connivance induced a naïve and trusting Nehru to arrogate his responsibility to a British head of state and so allow him to usurp a PM's function of Chairmanship of the Defence Committee of Cabinet. It is this ingenious largesse that resulted in Nehru handing over the running of the war to the United Nations instead of chasing the raiders back all the way to Domel.

The author has brought out all the above points forcefully before proceeding to describe in detail the operations of that first Jammu and Kashmir war : the capture and subsequent withdrawal from Kotli; the battles of Jhangar; the drive south from Uri to relieve Poonch; and the venture into the northern region.

In a chapter describing the machinations of the British in the Defence Committee, the author describes how they tried to influence the government into decisions and directions that suited Whitehall : trying to dissuade Nehru from taking over in Hyderabad by greatly exaggerating the might of the Nizam's forces and the razakars. Their assessment was proved grotesquely wrong in the event. For instance, the British Chiefs said that Bombay and Delhi would be bombed by the Hyderabad Air Force (which consisted of three Dakota transports).

General Bajwa's book gives emphasis to a very important lesson from this Jammu and Kashmir War : that countries such as ours are vulnerable to a variety of pressures from dominating western powers. The aftermath of the 11 September 2001 attacks on the US - the Afghanistan, Iraq and other developments, amply indicate that nothing has changed in this respect during the last fifty years.

*Jammu and Kashmir War (1947-1948): Political and Military Perspective. By Major General Kuldip Singh Bajwa (Retd). *Military Affairs Series*. (New Delhi : Har-Anand Publications, 2003), pp.328, Rs. 495.00, ISBN 81-241-0923-0.

**Major General D K Palit, VrC is a former Director of Military Operations.

Global Terrorism*

Brigadier SP Sinha (Retd)**

This book deliberately excludes certain forms of global terrorism such as NBC terrorism, United Nations mandated global protocols on terrorism, genesis and details of local or regional terrorist groups that do not impact globally. This has been done to keep the focus on Islamic jihad. In doing so the author has succeeded in dealing with its causes and consequences in depth. The author postulates that the current fight against global terrorism - rightly or wrongly - has taken the shape of a civilisational clash. He argues that when talking of global terrorism, the picture that immediately comes to mind is that of regressive Islamic orthodoxy bent upon spreading its ideology beyond its historical confines. He has briefly sketched the rise of radical Islam in the closing decades of the last century and the causes of its orthodoxy, which to a large extent lay at the doors of the Americans, who preferred to look away when Islamic fundamentalism was used as a tool to fight the Soviets in Afghanistan.

Throughout the book one theme keeps recurring and that is the role played by Pakistan and Saudi Arabia in the rise of radical Islam. The author takes the position that Pakistan and Saudi Arabia had begun to dream of a pan-Islamic movement and domination of the entire Muslim crescent from Europe to Philippines in the oil rich region of Asia. It is, however, debatable whether this was triggered by the desire to checkmate the US global power in Asia or a set of circumstances developed in the 70s and 80s which was conducive to the carving of strategic depth by Pakistan by extending its influence in Afghanistan. The author speculates that had the terrorists not acted as they did on 11 September 2001, the dream of Pakistan of extending its influence in the Central Asian region from its base in Afghanistan may well have come true.

***Dealing with Global Terrorism.** By Major General Vinod Saigal, VSM (Retd) (New Delhi : Sterling Publishers, 2003), pp. 398, Rs. 600.00, ISBN 8120725344.

**Brigadier SP Sinha is from 9 Gorkhas. He served in IPKF in Sri Lanka as BGS (Civil Affairs)

The Chinese perception of jihadi threat is dealt in the second part of the book under Collateral Ramifications. The transfer of nuclear and missile technology to Pakistan and its ramifications have been discussed not only in the context of India-Pakistan relations but also the horrifying dimensions of their possible transfer to Al Quaida. Part III deals with the changing nature of terrorist threats. The author explores the possibility of nuclear facility of Pakistan falling under the control of Islamic radicals. Some very controversial and hitherto unexplored aspects of terrorism have been discussed in part IV of the book. The lack of consensus on the definition of terrorism is one such aspect. The author is of the view that the impasse could be got over by constructing a shunt or by-pass. The author rightly suggests that if the specific elements of crime are recognised, much of the controversy and debate surrounding definitional impasse might be overcome. Another important, but not fully explored, aspect of terrorism, which manifests in stress to individuals and societies has been discussed in some detail. The author surmises that Al Quaida may have already won the psychological warfare against the Americans with the 11 September 2001 attacks and goes on to suggest that the Jihadis would retain the ability to cripple the USA or significantly impair its potential without resorting to the same type of terror. If this trend persists, Fortress America could become just that - a fortress for Americans incarcerated therein.

The unilateralism of the USA in dealing with terrorism and its disregard for the UNO has come for severe criticism by the author. No one today seriously disagrees with the dangers of the US unilateralism, but to say that American actions in Afghanistan or Iraq were marked by savagery and total disregard of civilian casualties would be unfair. Whatever may have been the motive for the American intervention, the military commanders did take adequate precautions to limit civilian casualties. Conversely, to limit one's own casualties is no crime.

Suicide missions are the most potent weapons of the terrorists today. The author has tried to answer what impels young men and women to undertake suicide missions and makes some very interesting observations. Most of the families in underdeveloped Islamic countries have large number of children. Birth control

measures are taboo in Islamic societies. Where families have fewer children, there is lesser motivation to enrol for suicide missions. Yet another reason given for an unending stream of recruits for suicide missions is the indoctrination of mothers, who view the sacrifice of their children as acts of martyrdom.

The UNO has to play a significant role in the fight against terrorism. For all its weaknesses, it is the only organisation to build global consensus. In his zeal to strengthen the UNO, the author wants it to take on responsibilities, which are impractical, thus making the UNO more irrelevant. To take the example offered by the author, to classify countries according to the quality and independence of their judiciary would not only be impractical but also in the bargain it may further widen the cleavage between countries.

In the final chapter the author suggests ways to fight terrorism on a long-term basis and suggests emancipation of women in Muslim societies and the revamping of the syllabi taught in madarsas as the surest way to curb the psyche of violence.

Major General Saighal has crafted a thought-provoking book. He has put across his arguments in a lucid style. One may not agree with many of his views, but the arguments are persuasive. Some of his predictions may turn out to be prescient. It is a book worth reading by all who want to understand the dynamics of jihad.

Short Reviews of Recent Books

India's Foreign Policy : Challenge of Terrorism, Fashioning New Interstate Equations. By J N Dixit (New Delhi : Gyan Publishing House, 2002), pp 392, Rs 540.00, ISBN 81-212-0785-1.

This book by JN Dixit, India's former Foreign Secretary and former Member of the National Security Advisory Board, is a continuation of his previous book on India's foreign policy and its neighbours. This treatise is a collection of his articles, which he has published from time to time, and lays emphasis on a few select areas of interest. He has penned down the various proposals and propositions, negotiating stances, dialogue perspectives, prospects and challenges, multilaterising the Kashmir issue. He discusses Afghanistan with emphasis on Taliban's military success in Afghanistan and its implications, the anti-terrorist campaign and its effects on India, emerging developments in Afghanistan's political and security arrangements, and Pakistan's role and policies in the anti-terrorist campaign. Then there are articles on the conceptual orientations in foreign policies; India versus Pakistan, dialogue resumption with Pakistan, the lessons learnt from the Agra summit, emerging trends in India's relations with US and Indo Pakistan relations in the context of fighting against terrorism. The author has given us a good insight on how relations between countries are dictated. Although Dixit has made a passing mention of terrorist problems in Assam, and the North East, it becomes obvious that he has not devoted sufficient attention that this area deserves. The problem has been neglected for too long. In the book one was also looking forward to some candid suggestions on how to formulate a long term foreign policy which caters to India's national interests irrespective of who rules at the Centre. Foreign policy is too serious a matter to be left to a few select. Yet, the book offers a rich and varied analysis and is recommended to all serious thinkers, both within the government and outside, who have the nation's interests close to heart.

Major General S K Datt, VSM (Retd)

Kashmir : Ethnic Conflict, International Dispute. By Iffat Malik (New Delhi : Oxford University Press, 2002), pp. 192, Rs. 450.00, ISBN 0-19-579622-5.

The writer provides for a pleasant surprise. She has dispassionately dealt with a sensitive subject like Kashmir and has realistically presented the problem in all its aspects. The reason could be that she was born and brought up in England and had her PhD from a British university. The writer has analysed the historical, ethnic and political dimensions of the Kashmir problem rather factually. The slow disaffection of Kashmiris who once stood with the Indian Army to fight Pakistani raiders in the early

post-Independence period, the communalisation of people who had been by and large secular because of the pan-Islamic fundamentalist influence, and the inherent Kashmiri disdain towards Pakistani crudeness that may destroy the *Kashmiriyat* culture, are all dealt with in detail.

The writer has done considerable research work and has gone through many Indian, Pakistani and foreign books to have a thorough background knowledge of the subject. The bibliography and the index in the end provide rich material for those who are interested in further study of the subject.

Subedar Major N Kunju (Retd)

Kashmir : How Far Can Vajpayee and Musharraf Go? Edited by Karan R Sawhney, (New Delhi : Peace Publications, Multicolor Services, 2001), pp 240, Rs. 250.00, ISBN 81-87345-00-4.

This is a collection of essays by eminent Indian scholars from Pakistan and the international community. First published in Peace Initiatives Journal and now reprinted in paper back form, these essays have been grouped in three parts.

Part I deals with the current situation in Jammu and Kashmir. There are a total of 12 essays in this part, mainly dealing with the history and the background of the Kashmir problem. The authors have brought out the need for the Central Government to first resolve the issue of autonomy to Jammu and Kashmir within the Indian Union as also autonomy to various regions of Jammu and Kashmir within the State. The essay titled "Conflict in J&K- a Profile" by Suba Chandran gives a good insight into the historical background of the problem including position of various parties to the dispute. While Amtiabh Mattoo's essay "Next Step in Kashmir" besides suggesting measures for resolving the issues of autonomy also suggests gathering support for the Line of Control (LoC) to be transformed into an International Border, another interesting essay by Brian Cloughly titled "Confidence Building in Kashmir - The Next Step" suggests ways and means to minimise firing at the LoC.

The theme of Part-II titled "Pakistani Perspectives" is that India and Pakistan have suffered economically because of Kashmir dispute and there is a need to change the perception and not hold the lives of one sixth of the world's population to ransom because of Kashmir dispute. Pakistan's anxiety about the control of water of Indus and its tributaries in Jammu and Kashmir is also highlighted.

Part-III consists of papers, and proceedings from the International Centre for Peace Initiatives (ICPI's) symposium held in Gurgaon on 25 and 26 November 2000. Besides messages of some important leaders, the recommendations of the symposium have been given under four groups. Group 'A' suggests restoration of peace, human dignity, facilitating interaction between people of various regions of Jammu and Kashmir as also people

across the LoC, revival of the economy and return of the migrants in a dignified manner. Group 'B', advocates end of violence, transparent political process including interaction between people across the LoC and release of political prisoners. Group 'C' suggests creating a congenial atmosphere for subsequent dialogues. Group 'D', recommends measures to be taken by both India and Pakistan to end violence and establishing an agenda to continue the peace process. Part IV lists documents such as the Shimla Agreement, and the Lahore Declaration statement on cease-fire by Indian Leaders.

Since the book is a compilation of essays written by different individuals there is a certain amount of repetition specially on the history and background of the problem. On the whole, an informative book on Kashmir suggesting sound measures for a long-term resolution of the problem.

Lieutenant General MM Lakhera, PVSM, AVSM, VSM (Retd)

Securing the Nation : Central Reserve Police Force (CRPF). By RSD Dogra (New Delhi : Manas Publications, 2001), pp. 215, Rs. 495.00, ISBN 81-7049-1286.

While information about life in the armed forces is aplenty, very little is known about the Central Police Organisations (CPOs). Lack of permanency of officer cadre has perhaps been the bane of the CPOs, with the IPS using it as a fiefdom for lateral promotion. The CRPF plays an important role in a multi ethnic, multi cultural society of India where filial bonds are strong and permeate the call of duty of the local police.

Commencing with a brief overview of the history of the Force, Dogra provides with memorable vignettes of his career in the organisation. Life in the CRPF is no bed of roses with the deployment extending from the Valley to North East, unlimited vagaries of service and a perpetual requirement to leave home and hearth at short notice. The author laces his narrative with references to these tribulations and trepidations. His keen eye for details provides us historical vignettes of the areas in which he has served, making his narrative a virtual travelogue. The result is a very perceptive account of a police officer attending to his call of duty in various parts of the country from Manipur to Kashmir and from the quiescent barrack life of Delhi to the harsh rigors of policing in the North East. A good book on the way of life in the CPOs.

Brigadier R K Bhonsle, SM
Case Studies on Military Law. By Major General Nilendra Kumar (New Delhi : Universal Law Publishing Co. Pvt Ltd., 2003), pp. 154, Rs. 150.00, ISBN 81-7534-318-7

A high standard of discipline is a pre-requisite for ensuring an Army's battle winning capability. Well disciplined and motivated soldiers can alone provide the cutting edge, whether in low intensity conflict or in a conventional

war. To maintain such discipline and to provide such motivation, officers as commanders have to lead, administer and win the confidence of the men under them by just, correct and prompt handling of disciplinary cases. However, the letter and spirit of the Army Code and standing instructions are not infrequently overlooked to the detriment of Service morale.

Case Studies on Military Law is claimed by the publishers as the first work of its kind carrying out a detailed analysis of violations of and non-compliance with the statutory and procedural requirements, as observed during scrutiny of legal and disciplinary cases in the Army. The illustrations compiled in this book have highlighted 91 actual cases relating to 45 different topics that were handled during the last few years. Major General Nilendra Kumar, has drawn upon his professional experience to group the cases under relevant headings, to wit, scrutiny of statutory complaints, investigation process, financial irregularities, hearing of charges, summary of evidence, summary court martial, cases of JCOs and MNS officers and other like topics. A special feature of the work is that it also deals with matters like human rights violations, litigation and arbitration proceedings. These case studies pertain to duties in peace stations as well in the field on active service and cover a wide canvas dealing with problems facing a newly inducted recruit as also senior military officers. Departing from the barren and beaten track of merely academic and procedural illustrations, the case study method in this book provides us with concrete lessons from actual instances. He has chosen to draw the reader's attention to common pitfalls that cause delay and impede correct disposal of cases. The practical utility of the work has been further enhanced by compilation of latest policy letters and directions concerning various topics covered by these case studies.

The quality of printing and editing is of a high order. Its subsequent edition will no doubt bring within its scope the usual and recurring mistakes noticed in convening, assembly and proceedings of courts-martial, other than summary court-martials, which this edition seems to have left out from its purview. Here is a well researched and documented book that will be useful not only to commanders and staff officers but also to officers preparing for their professional and entrance examinations. It is a 'must' for all military libraries.

Brigadier DM Sen (Retd)

Musharraf's War. By Major General Rajendra Nath (New Delhi : Lancer's Books 2003), pp. 298, Rs 540.00, ISBN 81-7095-094-5.

A compilation of 12 essays, this is yet another book on the Kargil War by the Strategic Research Centre, Chandigarh. As the blurb claims, this organisation represents 'the views of persons living in North India', away from the opinion-making hub of Delhi.

The book is conceptualised ambitiously in that it endeavours to encompass an entire gamut of issues pertaining to the Kargil War - from the historical standpoint to the intelligence fiasco, tactical and operational level matters to macro level issues. It also attempts to factor in the American and Chinese interests in the region. In the initial chapters, lessons from the past wars with Pakistan have been dealt with, bringing out the linkages with the Pakistani focus on Kargil. Restructuring of intelligence set up is dwelt upon thereafter. New tactical lessons are stated after deliberating on the actual operations. The story of the Indian Air Force in Kargil is an effort at vindication, giving it a different turn. The second part of the book deals with Indo-Pak rapprochement and an analysis of a RAND report. The chapter on the China factor does not have adequate link with the theme of the book.

With seven authors for twelve essays (five from the editor) even when overlooking repetition of ideas, it tends to render a one-sided account. However, it is an attempt at introspection, post-Kargil, and to that extent proposes various measures at different levels covering a wide swathe of related issues. The printing and factual errors make reading laborious.

Lieutenant Colonel H Dharmarajan, SM

Social Welfare in Pakistan. By Shireen Rehmatullah (Karachi : Oxford University Press, 2002), pp. xiv, 477, Rs. 595.00, ISBN 0-19-579632-2.

This book, written by an eminent social worker of Pakistan, having an experience of almost fifty years, is about shattered idealism and broken dreams as also about the resounding successes and dismal failures due to the victimisation of political and beaurocratic designs of the powers that be at a given period in time. In the process, some of its programmes and services survived, others fell by the wayside. The book provides enough food for thought to stir the social workers to analyse and review the content of social work practice which has blindly followed the West till now. The book provides a detailed account of old and new concepts in the field of social welfare programmes and discusses the issues of social policy, administration, planning, education, legislation, urban community development, medical help, worker's liberation, child welfare, the disabled, and the growth of NGOs.

All those interested in the history of social work in Pakistan, especially the social workers and the educationists, will find this book worth their effort to read through.

Shri I R Kumar

Conflict and Peacemaking in South Asia. Edited by P Sahadevan (New Delhi : Lancer's Books, 2001), pp. 523, Rs. 850.00, ISBN 81-7095-085-6.

The book has an optimistic theme in that it places peacemaking efficacy on par with the intractability of conflicts these efforts address.

Given the events over the last year, it would appear that such optimism in the South Asian context, specifically with respect to the pivotal states India and Pakistan, is debatable. Nevertheless, it reveals the hope and tenacity in peacemaking that alone can bring about any movement in the status quo on the several conflicts that endlessly plague South Asia.

The book is the outcome of a seminar at JNU in the wake of the nuclear tests in 1998. It is a useful addition to security literature, even if it is somewhat dated, for it deals with the plethora of bilateral and multilateral issues at the root of ongoing disputes and potential conflicts. The advantage of the book is in the treatment it gives issues other than those that comprise the usual fixations of regional security studies of Indo-Pak relations and Jammu and Kashmir. Thus we have the water sharing problem, the unresolved border problems and the Sino-Indian relations also getting the fair share of attention that is justly their due if we are to gain a perspective on the theme of peacemaking and conflict being complementary and of equal import in South Asia.

The book is divided into four sections. Part I may interest all strategic study enthusiasts for it deals with familiar issues of relative power, its usage and means to temper it. For the purposes of the study, China has rightly been included as a regional actor. Sawhney particularly is high on military detail, but has not been able to integrate these into a cohesive whole. Kanti Bajpai and Swaran Singh provide the optimism in their assessment of the nuclear question and CBMs respectively. Territorial disputes and water disputes are dealt with in subsequent two sections. This is an educative section in that knowledge of the disruptive as also peace inducing potential of these issues is not widely available and consequently these issues have not been adequately appreciated. Lastly, is a look at how global balances have affected the region, not only in furthering rivalries here but also in the manner in which external powers have tried to bring about a modus vivendi through their peacemaking efforts. The chapter by Moonis Ahmar, unfortunately the lone Pakistani contributor, brings the Pakistani thrust toward mediation into focus. The book could have a concluding, comprehensive chapter by the editor.

Major A Ahmed

Nuclear Proliferation Dynamics in Protracted Conflict Regions : A Comparative Study of South Asia and the Middle East. By Saira Khan (UK, Aldershot : Ashgate Publishing Limited, 2002), pp. 315, £ 45.00, ISBN 0 75461946 X.

Contrary to popular expectations, peace has not descended upon the strife-torn contemporary world. The probability of war in protracted conflict regions has increased manifold due to some terrorist outfits trying to reach for nuclear devices. In some cases the terrorist organisations are working closely with the regular armed forces; they have become an

extension of the state policy, pursuing the agenda of the State by using all overt and covert means. The conventional search for deterrence against nuclear weapons has yielded very little and some regions of the world have literally become tinderboxes.

The author has brought out a structured study with detailed empirical analysis of the nuclear options available to states of South Asia—India and Pakistan, the Middle East states of Israel, Iraq and Iran and East Asian States of North Korea and Taiwan. The arguments of the author are well supported by extensive case studies of protracted conflicts. Saira Khan has given a new dimension to the question of nuclear proliferation by stating that proliferation propensities are most salient among some states involved in protracted conflict. The reading of the book suggests that each protracted conflict with different overtones and causes has been analysed on its merit and presented in a factual manner.

The volume is divided into three parts; the first brings out theoretical aspects of nuclear proliferation while the second and third parts analyse the case studies of the conflicts in South Asian and the Middle East States. The book is recommended to be read by all those scholars who seriously desire for peace in the region.

Lieutenant Colonel S Chandra

Nomadism and Colonialism : A Hundred Years of Baluchistan 1872-1972. By Fred Scholz (New Delhi : Oxford University Press, 2002), pp. 328, Rs. 695.00, ISBN 0-19-579638-1

This intense study of the refracted transformation of the nomadic society of Baluchistan, firstly under the cautious extension of British colonial authority since the 1870s and, after 1947, assimilative thrust of new Pakistani nationhood, makes a major contribution to the historiography of this remote region. The inherent theme of the book is to explain how a fragmented and staunchly traditional society fell to the overwhelming pressures of expanding colonialism of a rank outsider and, later, political centralisation by the new State of Pakistan.

The author has first elaborated upon the topographical sub-regions of the vast arid mountainous landmass of Baluchistan and the demographically divergent tribal and sub-tribal clans thereof, mainly the Bruhis, Pathans and Baluchis, whose ethnicity extended to contiguous regions of Iran, Afghanistan and NW Frontier province of erstwhile India. Consequent to the elimination of Russian threat by 1850, British colonial aspirations were manifested in a limited Forward Policy and Indirect Rule after 1872. Albeit theirs was a conciliatory intervention tempered with lucrative employment and light taxation but these were the first inroads by colonialism into Baluchi nomadism. Road and railway network and a few military cantonments to Chaman, Quetta came up during 1900-1920. The process of integration faced resistance and even revolt resulting in imposition

of martial law twice. The author has placed these crucial developments in proper perspective.

The author's work is a useful contribution to history. However, the repeated link-up and co-relation with the other writers during his projection of facts and issues often detract from readability of his narration.

Major General S K Talwar (Retd)

Reaping The Whirlwind: The Taliban Movement in Afghanistan.
By Michael Griffin (UK: Pluto Press, 2001), pp. 283, £ 19.99, ISBN 0-7453-1274-8.

Afghanistan's rickety and knotty history was further convoluted by the appearance of the Taliban, which, though maintaining a will-o'-the-wisp character was central to the annihilation of the warlords who dominated the countryside in penny packets after the Soviet pullout. It is perhaps the most traditionalist Islamic movement of the 20th Century. At the same time, it is also the least understood, and the most interesting and disturbing one. Now Michael Griffin has come up with a lucid, detailed, deeply investigated and colourfully written account of this organisation that will lead to its better understanding. Griffin teases out the shades of political, religious and cultural discord in Afghanistan. Though, essentially covering the period from October 1994, when Kandahar fell to an obscure militia of religious students, through their face-off with the Americans over Osama-bin-Laden, recognition of the Taliban government first by Pakistan then followed by Saudi Arabia and the United Arab Emirates, Mushharraf's coup in Pakistan; to the imposition of UN sanctions in 2000, it nevertheless profiles the Taliban in its entirety. The author elaborates on its genesis and values, its religious and political philosophy and its particularly fiery brand of fundamentalism that came to be feared by one and all.

This book sheds fresh light on two interesting aspects relating to foreign policy issues as well. The first one is the extent to which the Clinton administration cajoled Pakistan and Saudi Arabia to put together and bankroll tribal militia bands to end the misrule and trepidations of the marauding mujahedeen in the wake of the Soviet withdrawal. To this end it illustrates the awesome disadvantage of riding the tiger in fiercely sectarian areas of the world, namely reaping the whirlwind as a spin-off. The second one is to provide a coherent explanation of the calculated ineptitude of the FBI, CIA and other American Intelligence agencies in dealing with the supposed threats posed to the US by the Al Quaida in an era when Bush's links with the US energy industry, especially UNOCAL's trans-Afghanistan oil pipe-line, are hardly likely to be a help in comprehending the US foreign policy on Afghanistan where the uncanny (in) ability of its makers has converted a tragedy into a calamity.

Michael Griffin has been able to cobble together an all-inclusive narrative on the Taliban. Scholars keen on knowing the intricacies of the movement will not be dissatisfied in referring to this book.

Lieutenant Colonel A K Sharma (Retd)

Afghanistan and Central Asia in the New Great Game. By Shams-ud-Din and Bhaswati Sarkar (New Delhi : Lancer's Books, 2003), pp 189, Rs. 430.00, ISBN 81-7095-097-X.

Afghanistan came into focus once again during "Operation Infinite Freedom" after being almost forgotten by the world. Several books were then written on this country dealing with different aspects. This book highlights the importance of Afghanistan and Central Asia in the new great game of the United States exerting its ultimate power in international politics. The book traces the history of the continuous turmoil since the Anglo-Russian rivalry and details the ethnic composition of the Afghan society. A background on the Soviet intervention in December 1979 with the reasons thereof, the US assistance to the resistance movement compelling the Russians to pull out, the rise of the Taliban to power and their failure to provide a safe conduit for oil/natural gas from the Central Asian Republics are also dealt here. The most interesting part of the book is the highlighting of strategic and economic interests of various powers and how Afghanistan once again finds itself drawn in the juggernaut of great game. A fair justification has been done to highlight the role of the UN in facilitating the Soviet withdrawal and the establishment of an interim government in Afghanistan after the fall of the Taliban. This chapter is fully supported by several Annexures to it. The last chapter covers the background to "Operation Infinite Freedom" and the events leading to the restoration of peace for the millions of Afghans who have suffered during the last half a century.

The book, however, fails to highlight the complexity of the Afghan society and how the terrain has dictated the lives of the people and the rule under King Zahir Shah. Most surprisingly, it overlooks the importance of the longstanding Indo-Afghan relations and the interests of India and Afghanistan. The book should have also dealt with the future of Afghanistan in the new great game.

The book justifies its title, is well researched and is a useful reading in understanding why Afghanistan despite its fragile economy and political instability continues to be of such strategic importance for not only its neighbours but also the world's most powerful nations.

Major General Samay Ram, UYSM, AVSM, VSM (Retd)

Powering China—Reforming the Electric Power Industry in China. By Xu Yi-chong (UK : Ashgate Publishing, 2002), pp. 295, £ 55.00, ISBN 0-7546-2251-7.

This interesting book is compiled from the proceedings of a seminar at School of Politics and Public Policy at Griffith University, Brisbane; followed by long visits by the author to Brisbane and China during the years 2000 and 2001. The main theme of the book is the restructuring of the power industry.

China suffered from acute shortages in power generation till 1973 when the first 200-Megawatt generating sets were installed. The first 300 KKV transmission line functioned in 1975. Rapid development of power production followed, to meet the demands of heavy industries. China willingly adopted other methods for producing power. For example, supplying 70 per cent of the power generated to Hong Kong paid for the Daya Bay Nuclear Project, which was already completed. Another example is the use of wind power. By 1998, 56.9 megawatts were installed, including in Tibet where they also used solar and geo thermal sources. Lahsa has a capacity of 25 megawatts.

Public control by the State Power Corporation of China took place in 1995; the Ministry of Power was dissolved in 1996. Political support was forthcoming as economy was expected to expand; a change from central planning to market economy was accepted. In accordance with market forces, a radical change was made in generation, transmission and distribution. These were separated in the year 1999. The result is that they are well ahead in power reforms. In India, Orissa was the first state to separate power generation from transmission and distribution. The inevitable problem of redundant labour was passed down to the provinces; some workers had to revert to farming.

An interesting book for military readers who must understand the background to the expansion of Chinese economy.

Major General Partap Narain (Retd)

Political Institutions : Democracy and Social Choice. By Josep M Colomer (Oxford : Oxford University Press, 2001), pp. 256, Price not indicated, ISBN 0-19-924183-X.

The author has done an extensive analyses of political institutions and argues that the more complex the political institution, the more stable and socially efficient the outcome will be. Concepts, questions, and insights are based on social choice theory. Empirical focus is cast on around 40 countries and a few international organisations. The period covered is from 17th Century to the present. It examines social choice in democratic framework challenging the conventional wisdom and demonstrating how sharing and dividing power produces more socially satisfactory results. Findings of this research work include valuable inputs for changing the

Indian political scenario both in the states and at the centre. It is, therefore, an important addition to the large mass of literature available on this topic and gives new interpretations to the existing views on the subject. Here is a book that sheds new light on the complex phenomenon of political institutional relationship. List of figures, tables and the references enrich the usefulness of the work.

It provides quantitative authenticity to the work and a suitable framework for conducting further research on this subject.

Dr Raj Kumar

Principles of Data Mining. David Hand, Heikki, Mannila and Padhraic Smyth (USA : MIT Press, 2001), pp. 490, Price not indicated, ISBN 0-262-08290-X.

Data, the root of information and knowledge, is increasingly influencing our practicing work life today. Data mining is one of the most significant computer applications beneficial to a wide spectrum of the knowledge community; scientists, engineers, researchers and managers. However focused on the elites in knowledge usage, its benefits are lesser known than other computer applications today. This book to some extent seeks to overcome this shortcoming by providing us an overview of the principles of data mining in a very lucid, simple to understand and user friendly format, which would be beneficial to the lay reader and the specialist alike.

Created by multi disciplinary experts in the fields of statistics, information and computer science, it is neatly divided into three sections. The first comprises of the basics of data mining and is thus introductory in nature, which should be of interest to the general reader. The next section covers data algorithms and provides an overview of how to create and analyse algorithms, while the third section deals with applications of algorithms to data mining tasks in practical work life. The ambit covered thus is all encompassing providing the book the tenor of a primer on data mining. While it would provide to the uninitiated a guide map of data mining fundamentals, it is a must for any modern knowledge worker, who has to invariably support his hypothesis through data analysis and to that extent should form a part of every institutional library.

Brigadier R K Bhonsle, SM

Lewin of Greenwich : The Authorised Biography of Admiral of the Fleet Lord Lewin. By Richard Hill (London : Cassel & Co., 2000), pp. 443, £ 25.00, ISBN 0-304-35329-0.

In naval circles, Rear Admiral Richard Hill, the Managing Editor of *Naval Review* and author of six novels, needs no introduction. Being a retired senior naval officer, and having worked for Lord Lewin in several

appointments, he is qualified to write this biography of the great Admiral of the Fleet.

The author narrates the life of Lord Lewin from 1949 when he joined the Royal Navy till 1982, during which period he successfully commanded a number of ships including the aircraft carrier *Hermes*. The most important decision taken by him during the command of this Carrier was to steam on one shaft from Hong Kong to UK so that the ship could have planned maintenance on the other shaft and arrive in UK. A good lesson for all Commanding Officers. Lord Lewin also commanded the Dartmouth Training Squadron from 1961 to 1963 and the Far Eastern Fleet from 1969 to 1970. The author then describes Lord Lewin's important shore assignments which were Director, Tactical and Weapons Policy, Assistant Chief of the Naval Staff (Plans) and Vice Chief of the Naval Staff when he was responsible for the introduction of Sea Harrier Aircraft in the Royal Navy.

As First Sea Lord, he was responsible for getting the Royal Navy in a sound and modern condition with sophisticated ships, aircraft and submarines, with state of the art weapon systems and machinery. As the Chief of Defence Staff he presided over the planning of Trident as the next stage nuclear deterrent and initiated reforms in the higher defence organisation that proved viable for the rest of the century.

Admiral Hill has taken pains to complete a very authentic biography, and in an interesting manner, narrating with panache the achievements in all the appointments of the Admiral of the Fleet. An interesting and readable book which should find a place in all naval libraries.

Commodore RP Khanna, AVSM (Retd)

The Memories of a Military Man. By Colonel KS Rajamani (Chennai : Chengacherial Publishers, 2003), pp 160, Rs. 100.00 (Pbk), ISBN 81-7875-026-0.

Commissioned into the Corps of Engineers in 1964, he served with the Madras Sappers and has recorded vignettes of his service with the *Quinsap Thambis*, both in war and peace. These short anecdotes as well as other snippets of military life form the basis of the book, which is printed in paperback. The author's deep attachment for the army and the troops that he served comes through in the anecdotes, which reflect a fair and honest depiction of life in uniform. There are no great heroes or tales of blood and glory to be found within its pages. Rather, the warm glow of a soldier recounting the interesting tales of a life well spent in the service of the nation.

The book fills the oft-felt void in easy-to-read literature on military themes. The book is particularly recommended for inclusion in school and college libraries.

Squadron Leader Rana TS Chhina (Retd)

Additions to the USI Library for the Quarter - Ending April-June 2003

*(The books reviewed in January-March 2003 issue have been added
to the Library during this quarter but not shown in this list)*

ASIA

Afro-Asia and Contemporary Politics. By Jagdish Sharma, New Delhi, Anamika Pub & Distributors, 2003, pp 355, Rs. 700.00, ISBN- 81-7975-035-3.

Social Protection in Asia. By Sarah Cook & Others, New Delhi, Har Anand Publications, 2003, pp 288, Rs. 395.00, ISBN-81-241-0881-4.

ENVIRONMENT

Environment Scenario for 21 Century. By S K Agarwal, New Delhi, A P H Publishing House, 2003, pp 480, Rs. 995.00, ISBN-81-7648-418-0.

GLOBALISATION AND MODERNISATION

Postindustrial Society And Postmodernism. by Virendra K Roy, Delhi, S S Publishers, 2003, pp 490, Rs. 850.00, ISBN-81-85396-38-8.

Globalisation or Gobble-isation: The Arab Experience. By Ash Narain Roy, Delhi, Konark Publishers, 2003, pp189, Rs. 350.00, ISBN-812200648-5

INDIA - ECONOMY

Economic Policy in India - Managing Change. By Venugopal Reddy Y, New Delhi, UBSPD, 2003, pp328, Rs. 375, ISBN-81-7476-422-4

Economic Reforms in India. Ed By PP Arya & B B Tandon New Delhi, Deep & Deep, 2003, pp670, Rs. 1150.00, ISBN-81-7629-435-7.

Evolution of Economic Policy In India. By P N Dhar, New Delhi, Oxford University Press, 2003, pp252, Rs. 525.00, ISBN-019366413-2.

Money Laundering: An Insight into the Dark World of Financial Frauds. By Lal Bhure, New Delhi, Siddharth Publications, 2003, pp 262, Rs. 400, ISBN-81-7220-151-6

The Right to Tell: the Role of Mass Media in Economic Development. By World Bank Institute, Washington D C The World Bank, 2002, pp 322, \$ 12.25, ISBN-0-8213-5203-2

INDIA - FOREIGN POLICY

Continuity and Change: India's Foreign Policy. I K Gujral, New Delhi, Macmillan India, 2003, pp 264, Rs. 395.00, ISBN-0-333-93681-7.

MILITARY MATTERS

The Gold Bird: Pakistan and its Air Force: Observations of a Pilot. By Manseoor Shah, New Delhi, Oxford Univ Press, 2002, pp 318, Rs. 495.00 ISBN-0-19-578772-8.

Infantry Tactics. By Erwin Rommel, Dehradun, Natraj Publications, 2003, pp 265, Rs. 295.00, ISBN-81-8158-000-1.

A Military History of Medieval India. Maj Gen Gurcharan Singh, New Delhi, Vision Books, 2003, pp 887, Rs. 1250.00, ISBN-81-7094-525-9.

Param Vir: Our Heroes in Battle. By Maj Gen Ian Cardozo, New Delhi, Roli Books, 2003, pp 225, Rs. 295 00, ISBN-81-7436-262-2.

Special Operations: Weapons & Tactics. By T J Mullin, London, Green Hill Books, 2003, pp 174, £-19.99, ISBN-1-85367-527-x.

LEADERSHIP

Seven Zones for Leadership: Acting Authentically in Stability and Chaos. By Robert W Terry, Delhi, Jaico Publishers, 2003, pp448, Rs. 995.00, ISBN-81-7992-108-5.

INTERNATIONAL SECURITY

Contemporary Peacemaking: Conflict, Violence and Peace Process. By John Darby and Roger MacGinty, New York, Palgrave, 2003, pp 296, £12.99, ISBN-1-4039-0139-2.

PAKISTAN

Pakistan: In the Face of the Afghan Conflict 1979-1981. By Frederic Grare & J L Kilams, New Delhi, India Research Press, 2003, pp 238, Rs. 495.00 ISBN-81-8835304-3.

Pakistan: In the Shadow of Jihad and Afghanistan. by Mary Arne Weaver, New Delhi, Penguin Books, 2002, pp 284, Rs. 395.00, ISBN-0-67-004959-X

SOUTHEAST ASIA

The Cambridge History of Southeast Asia (4 Vols). By Nicholas Tarling, UK Cambridge University Press, 1999, Rs. 2700.00, ISBN-0521-66369-5 (Vol-1); ISBN-0521-66370-9 (Vol-2); ISBN-0521-66371-7 (Vol-3); ISBN-0521-66372-5 (Vol-4)

SPACE

Space: The Final Frontier? By Gianecarlo Genta And Roycroft M, U K, Cambridge University Press, 2003, pp 401, Rs. 995.00, ISBN-0-521-81403-0.

THE COMPLETE NEWSMAGAZINE ON NATIONAL SECURITY **FORCE**

All these years you relied on second hand sources. Now, for the first time, get information in the right perspective. No academic lecturing, no airheaded opinions. Only plain reportage. Simple and lucid. Both for the experts and the national security enthusiasts.

Because truth cannot be shortchanged.

The inaugural issue on August 15 includes features on the Line of Control, India's potential anti-missile weapon system Akash, the dilemma of the alienated minorities of India and shortfall of officers in the forces.

AN ARROWHEAD MEDIA PVT LTD PUBLICATION

For free inaugural copy, subscription and advertisement details write to

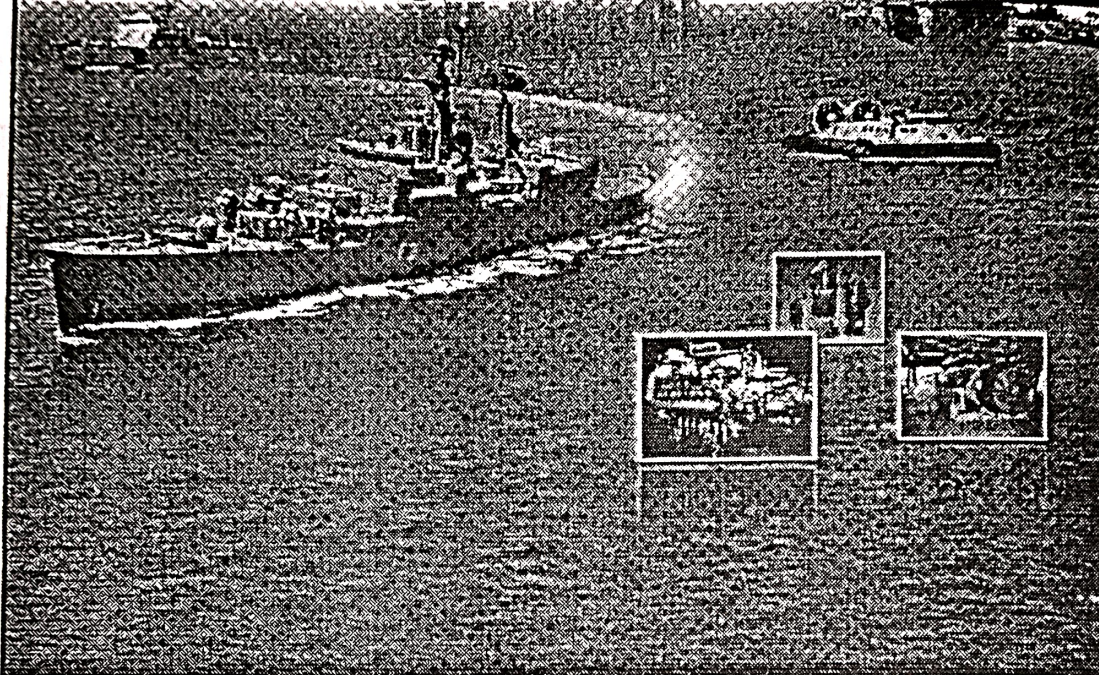
Force newsmagazine

110, Sector 37, Arun Vihar, Noida 201301, (Uttar Pradesh) India

Email: pravinsawhney@vsnl.net, ghazalawahab@rediffmail.com



In pursuit of peace... ground realities on water



For every nation, preparedness for self-defence is of paramount importance. India is no exception.

And playing a behind-the-scenes yet significant role as a defence shipyard is GRSE, engaged in the construction of a series of various types of ships/craft for the Indian Navy and Coast Guard.

Yet this is only a tip of the iceberg. Today GRSE manufactures Frigates, Corvettes, Fleet Tankers, Landing Ship Tanks (Large), Survey Vessels, Fast Attack Craft for the Indian Navy; Hovercraft for Coast Guards and BSF, plus a wide range of shipboard equipment.

Where GRSE stands out uniquely is that it is the only shipbuilder in India that makes ship engines too. Using state-of-the-art technology.

GRSE's proven versatility is also reflected in the diversified range of products it makes : diesel engines for marine application and power generation, portable steel bridges, submersible/ turbine pumps for agriculture, the list goes on.

In short, with peace, progress and prosperity of the nation in view, GRSE has its work cut out on ground realities - a never ending voyage with a dedicated mission.

Garden Reach Shipbuilders & Engineers Ltd.

(A Government of India Undertaking)

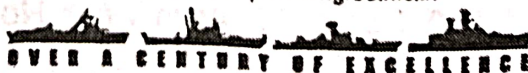
43/46, Garden Reach Road, Kolkata 700 024

Phone: 469-8100, Telex: 021-8514,

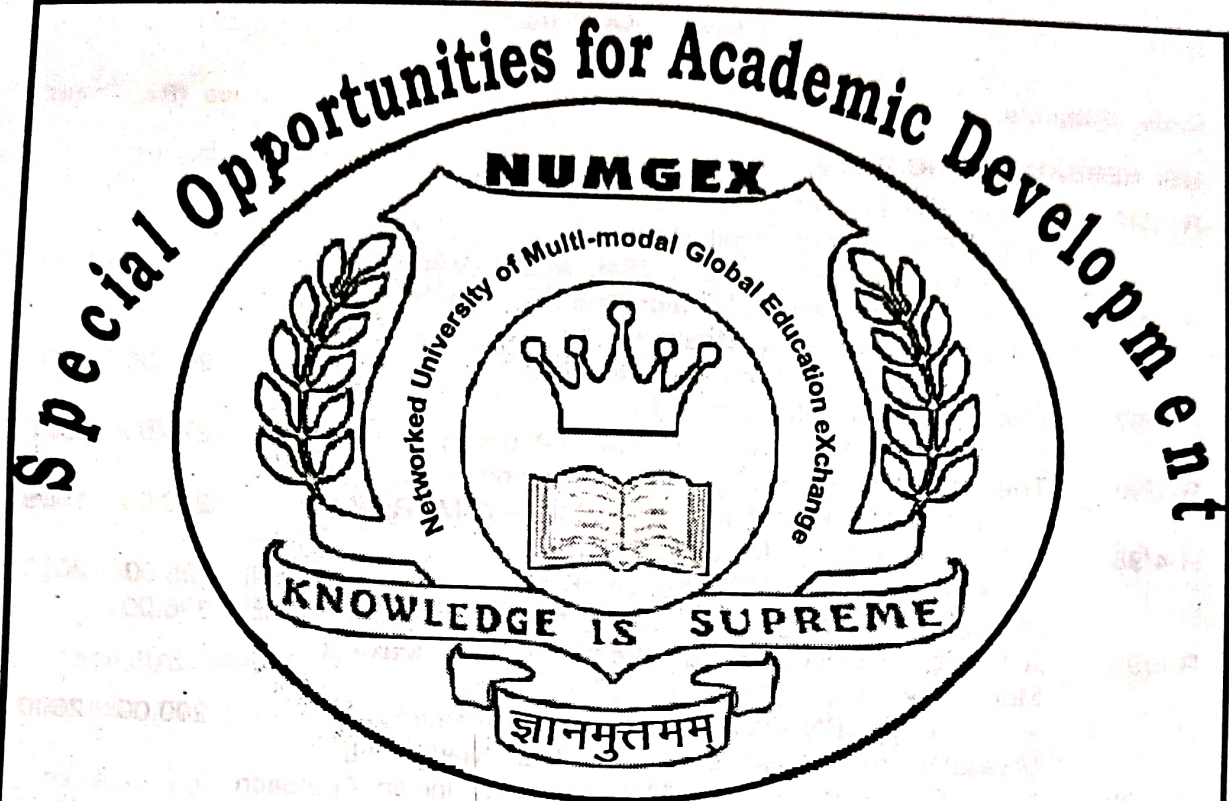
Fax: (033) 469-8150/8144

E-mail : dsgrse@vsnl.net; fgrse@cal3vsnl.net.in

Website : <http://www.grse.nic.in>



TCP-A.02



KNOWLEDGE WITHOUT BARRIERS

Networked University of Multi-modal Global Education eXchange (NUMGEX) has been established under Chhattisgarh Niji Kshetra Vishwavidyalaya (Sthapana Aur Viniyaman) Adhiniyam 2002 vide Gazette Notification No. F73-45/2003/HE/38 and legally empowered to grant degrees, diplomas & certificates in various streams.

- To acquire higher educational qualification such as Ph.D., M.Tech., MA, MCA, MBA, LLM and various Under Graduate programmes like BA, BBA, BCA, B.Com., B.Sc.(Electronics) etc.
- Over 150 Knowledge Access Nodes (KAN) across the country.

Special Fee Concession of 20% for the Serving / Retired personnel of Defence / Para Military Forces, Wards of martyrs, Widows, Physically challenged

Project Office : Block 58, Plot No.8, Nehru Nagar (East), Bhilai, Distt. DURG (CHHATTISGARH) - 490020
National Co-ordinating Office : UU - 11, PITAMPURA, DELHI- 110088 Phone : 011- 27347789-90-91 , 27342201, Mobile(SMS)- 9810383849, 9811770753

**For Details Contact : Major Gen. R. K. Kaushal(Retd),
Pro Vice Chancellor - 9811606215**

Visit Our Web Site: www.numgex.ac.in, www.numgex.com, www.numgex.net
E- mail: admin@numgex.ac.in, numgex@rediffmail.com, numgex@hotmail.com

PLEASE ADD 0 BEFORE MOBILE NUMBERS IF CALLING FROM OUTSIDE DELHI

Code	Subjects	Price (Rs.)	Year
USI RESEARCH PROJECTS		(for Members Rs. 50.00)	
R-1/97	Shape and Size of the Indian Navy in the Early Twenty First Century by Vice Adm R B Suri, PVSM, AVSM, VSM (Retd).	75.00	1998
R-2/97	Sustainable Defence : Harmonising Long and Short Term Goals by Air Mshl Vir Narain, PVSM (Retd).	200.00	1999
R-5/97	Low Intensity Conflicts in India by Lt Gen V K Nayar, PVSM, SM (Retd).	275.00	2001
R-1/98	The Impact of Emerging Technologies on Air Warfare by Air Mshl Bharat Kumar, PVSM, AVSM (Retd).	200.00	1999
R-4/98	A Nuclear Strategy for India by Rear Adm K Raja Menon (Retd).	(SB) 295.00/	2000
	(Available from Sage Publications, New Delhi)	(HB) 395.00	
R-6/98	A Career in India's Armed Forces – How to Make it More Attractive. by Lt Gen RN Mahajan, PVSM, VSM (Retd).	200.00	2000
	(Available from Ocean Books Pvt. Ltd., New Delhi)		
R-7/98	Naval Confidence Building Measures - An Indian Approach. by Cdr Vijay Sakhuja	650.00	2001
	(Available from Knowledge World, New Delhi)		
R-9/99	Information Technology – The Future Warfare Weapon by Lt Cdr A Anand.	150.00	2000
	(Available from Ocean Books Pvt. Ltd., New Delhi)		
R-11/99	Secure or Perish by Maj Gen Yashwant Deva, AVSM (Retd).	400.00	2001
	(Available from Ocean Books Pvt. Ltd., New Delhi)		
R-13/2000	Security Threats to North East India by Lt Gen NS Narahari, PVSM (Retd)	595.00	2002
	(Available from Manas Publications, New Delhi)		
R-15/2000	The Indian Air Force : A Balanced Strategic and Tactical Application by Air Vice Mshl Viney Kapila, AVSM, VrC (Retd)	200.00	2002
	(Available from Ocean Books Pvt. Ltd., New Delhi)		
R-16/2000	Transforming to the Information Warfare Paradigm Col RK Bhonsle, SM	150.00	2001
	(Available from Ocean Books Pvt. Ltd., New Delhi)		
R-18/2001	Human Resource Management in the Army Maj Gen SBL Kapoor, VSM (Retd)	495.00	2002
	(Available from Knowledge World, New Delhi)		
R-20/2001	Command and Control of Indian Nuclear Forces Lt Gen PK Pahwa, PVSM (Retd)	395.00	2002
	(Available from Knowledge World, New Delhi)		
R-21/2001	Space Warfare and Military Strategy: An Indian Perspective Brigadier A K Lal	300.00	2003
	(Available from Ocean Books, New Delhi)		
R-22/2001	India's Land Forces : Structural Imperatives Brig Jaspal Singh (Retd)	595.00	2002
	(Available from Manas Publications, New Delhi)		
R-26/2002	Environmental Security: Internal and External Dimensions and Response Colonel P K Gautam (Retd)	495.00	2003
	(Available from Knowledge World, New Delhi)		

(Postage and Packing extra)

Code	Subjects	Price (Rs.)	Year
USI NATIONAL SECURITY SERIES - 2000		250.00	2001
NS Lecture (a) (L-20)	Sino-Indian Relations in the New Millennium : Challenges and Prospects by CV Ranganathan, IFS (Retd).		
NS Seminar (b) (S-23)	Effectiveness of the National Security Council and Associated Bodies like the National Security Advisory Board		
NS Paper (c) (P-19)	Rising Fundamentalism : Implications for National Security by Maj Gen Afsir Karim, AVSM (Retd).		
USI NATIONAL SECURITY SERIES - 2001		250.00	2002
NS Lecture (a) (L-21)	Role of the Armed Forces in Formulating of India's Foreign Policy by JN Dixit, IFS (Retd).		
NS Seminar (b) (S-26)	Self Reliance in the Process of Defence Production : Including Involvement of Priyate Sector.		
USI NATIONAL SECURITY SERIES - 2002		495.00	2003
NS Lecture (a) (L-22)	India's Look East Policy: A Review and Way Ahead. by Shri I K Gujral.		
NS Seminar (b) (S-29)	Vulnerabilities of Our Economy in the Backdrop of Globalisation: An Analysis of India's Long Term Economic Security.		
NS Paper (c) (P-20)	Safeguarding of India's Energy Security. by Shri Chudamani Ratnam.		
USI OCCASIONAL PAPER			
1/99	Recent Developments in Afghanistan with Specific Reference to the Impact on India by Surya Gangadharan.	75.00	1999
USI DIGEST			
Vol III No. 5	Sep 2000 - Feb 2001.	75.00	Mar 2001
Vol III No. 6	Mar 2001 - Aug 2001.	75.00	Sep 2001
Vol IV No. 7	Sep 2001 - Feb 2002.	75.00	Mar 2002
Vol IV No. 8	May 2002 - Aug 2002.	75.00	Sep 2002
Vol V No. 9	Sep 2002 - Feb 2003.	75.00	Mar 2003
MISC			
History of the MacGregor Medals (1889-1989)		100.00	1994
		(for Members Rs. 50.00)	
How to Be A Successful Leader		125.00	1986
Book by Lt Gen (Dr) ML Chibber, PVSM, AVSM (Retd)			
		(Postage and Packing extra)	

Ask for your copy from:

UNITED SERVICE INSTITUTION OF INDIA
Rao Tula Ram Marg, (Opposite Signals Enclave), Post Bag No 8
Vasant Vihar PO, New Delhi-110057

USI

(Estd. 1870)

OUR ACTIVITIES

Library and Reading Room

The library holds over 40,000 books, and journals, including some books of 17th, 18th and 19th centuries, on an astonishing variety of subjects. While the principal emphasis is on strategy and defence, there are a large number of works on different vistas of Indian life. There are memoirs, biographies, recollections, diaries, journals, manuscripts for scholars and researchers. The reading room is air-conditioned, spacious and well stocked in terms of current reading material. Library was automated in 2002.

Correspondence Courses

The Institution runs regular correspondence courses for officers of the Armed Forces to assist them in preparing for promotion examinations, and for the entrance examinations to the Defence Services Staff College and Technical Staff College. Over the years, this has been a significant and well-received activity.

USI Journal

The USI Journal is the oldest surviving defence journal in the country and in Asia, having first appeared in 1871. It is supplied free to all members, and in an era when there is a feeling that free expression of views by Defence personnel is not looked upon kindly by the establishment, the Journal in fact provides just such a forum, without regard to seniority and length of service in the Armed Forces, subject of course, to propriety and quality of the written work.

Centre for Research

The Centre for Research was established in 1995 to enable scholars to undertake comprehensive study of selected subjects of topical interest on national security matters.

USI Centre for UN Peacekeeping (CUNPK)

The Centre was established in 2000. It aims at organising workshops, seminars and training capsules for peace-keepers, observers and staff officers - both Indian and foreign. It also oversees the practical training of Indian contingents at the Rajputana Rifles Training Centre. It functions under a Board of Management headed by the Vice Chief of the Army Staff and works in close coordination with the Service Headquarters and the Ministries of External Affairs and Defence.

Centre for Armed Forces Historical Research (CAFHR)

The Centre was established in 2001 and encourages study and research into the history of the Indian Armed Forces with objectivity, covering different facets like strategic, tactical, logistics, organisational and socio-economic aspects and their implementation.

Gold Medal Essay Competitions

Every year the Institution organises two gold medal essay competitions: one for Officers below 10 years of service and the other for all members. These essays, the first one of which was introduced in 1871, constitute a barometer of opinion on matters that affect national security in general and the defence forces in particular.

Lectures, Discussions and Seminars

A series of lectures, discussions and seminars on service matters, international affairs, and topics of general interest to the Services, are organised for the benefit of local members in Delhi.

MacGregor Medal

This medal is awarded to Armed Forces personnel for valuable reconnaissance and adventure activity they may have undertaken.

MEMBERSHIP

1. All classes of membership except temporary membership and membership of Service Officers applying for Correspondence Courses being conducted by the USI, will be subject to approval by the Executive Committee. The following are ordinarily eligible to become members of the Institution, with full voting rights :-
 - (a) Officers of the Armed Forces.
 - (b) Class I Gazetted Officers of the Central Services associated with the field of Defence (IAS, IFS, IPS).
 - (c) Any category mentioned in sub-para (a) and (b) above will be eligible even though retired or released from the Service.
 - (d) Cadets from the NDA and Cadets from the Service Academies and Midshipmen.
2. Persons entitled to membership, may become Life Members on payment of the subscription laid down from time to time. Cadets from the NDA and other Service Academies can do so only on commissioning.

For further particulars, please write to Director, USI of India, Rao Tula Ram Marg, (opposite Signals Enclave) Post Bag No 8, Vasant Vihar PO, New Delhi-110057

Printed by Manish Comprint, New Delhi - 110 015 Phone : 25103066