

U.S.I. JOURNAL

INDIA'S OLDEST JOURNAL ON DEFENCE AFFAIRS

(Established : 1870)



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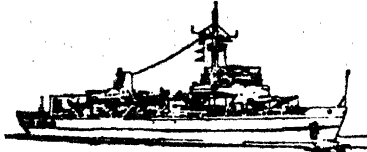
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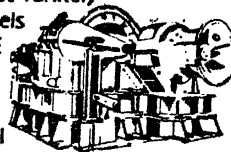
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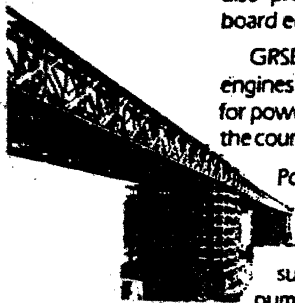
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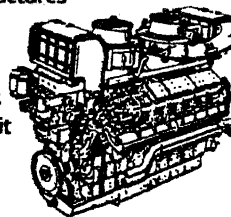


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NOTE

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Award of Admiral R.D. Katari Research Fellowship - 1996

The Board of Management of USI Research Centre has awarded the Admiral R.D. Katari Research Fellowship for 1996 to Vice Admiral R.B. Suri, PVSM, AVSM, N.M. (Retd). The subject of the research project is :

"Shape and Size of the Indian Navy in the Early Twenty-First Century".

The Board has also appointed Captain M.S. Mamik (IN) as Assistant Research Fellow along with Vice Admiral R.B. Suri to work on the same project.

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EDITORIAL

Old Association, New Opportunities

The lead article in this issue of the Journal contains the text of the talk given by Sir Nicholas Fenn, former British High Commissioner in India, to the members of the United Service Institution of India, on "Indo-British Relations". The talk is a presentation of the growing and healthy relations between the two countries with a bright vision of the future. The entire field of bilateral relations has been reviewed by Sir Nicholas with remarkable insight and great understanding of the Indian people.

At this golden moment in the history of the great world and almost 50 years after gaining Independence from Britain, India is at the crossroads with expanding range of geostrategic options. At this stage, our common heritage of democratic and secular values and our common interests call for a synergistic relationship between India and Britain. In this context, the presentation by Sir Nicholas shows quiet consideration of a long term perspective between India and Britain in the new dynamics of international political order.

Indo-British partnership for peace and development, strengthened by Sir Nicholas during his four-year tenure in India, while based on old association offers new opportunities for both countries to embark on a journey of mutual discovery. Economic interdependence and economic logic of new thinking would guide the way in furthering Indo-British relations to greater mutual benefit. To be sure, Sir Nicholas has played a crucial role in making this future vision possible.

Indo - British Relations

SIR NICHOLAS FENN

INTRODUCTORY REMARKS BY THE CHAIRMAN, MR. SALMAN KHURSHEED, MINISTER OF STATE FOR EXTERNAL AFFAIRS

Air Marshal Osman, Sir Nicholas Fenn and distinguished lady and gentlemen. It is a great honour, indeed a privilege for me, a matter of personal satisfaction to be here at this moment introducing Sir Nicholas Fenn to all of you. He has been a very good friend, and I start my introduction with that deliberately, as a Minister in the Ministry of External Affairs, and certainly a friend to India. The four years in this country he has spent with us in representing the UK have been very rewarding years. These years could be described perhaps as a watershed in our relations.

I have had the opportunity of meeting with him this morning and we did go over the work that we have done in these 4 years. We thought we agreed on one point: a major departure has been made towards something perhaps, today we cannot even imagine the true strength, its depth and its enormous possibilities and in time to come, in terms of relationship between our two countries. And all of that started during the last 4 years. If I am to describe it, it would be best described as a fresh shoot from an old tree trunk, a fresh shoot of an old tree which never dies. When a trunk begins to age you need some new vitality and new life and that has happened in these last four years and you can see that shoot is taking off into an enormous tree and not in too distant future.

Sir Nicholas has had a very distinguished career in representing his country in various capacities. Most important, of course, for you certainly, for many of you who wear the air force uniforms, certainly for Air Marshal Osman, I think it is important to know that he did his training in the Air Force. I am not quite sure if he actually flew as a pilot....yes he did. He did his training in the Air Force before joining the diplomatic service; so if any of you have grandiose ideas about the Indian Foreign Service, do not be discouraged by the fact that you wear military uniform. There might well be opportunity for you beyond the past achievements and glory that you have already prepared yourselves for. From there of course he has served in distinguished

Texts of the Introductory Remarks by Mr. Salman Khursheed and of a talk given by Sir Nicholas Fenn, British High Commissioner in India to the members of the United Service Institution of India and other Senior Officers in New Delhi on February 9, 1996.

capacity in many many countries and served also very closely with Lord Carrington, who in his own way made a very major contribution to the foreign policy in the UK.

But I think what is most important is that he came to us with great experience, wisdom and a sense of belonging and I think that he goes back now from India with great reluctance and certainly we leave him with great reluctance and I hope that there will be beyond this a great opportunity that he has created for himself and for us and for all of us together. There will be other opportunities too of working for or with India.

Fifty years down the road, from the time of independence, will be a moment both of reflection and a moment of celebration, and it would be interesting to see how we are able to reflect and celebrate together an event that has meant so much to both of us. I recall the first time when I met Sir Nicholas Fenn over dinner was when I was mentioning to him my favourite lines about the relationship between our two countries, a line, most of you, perhaps, in schools or later read from 'A Passage to India' by E.M. Forster, would recall. The Meeting between Fielding and Aziz, after all the trauma and difficulties and after all the tribulations they have been through, sometimes together and sometimes separately, they are riding off into the sun-set on horses together and Fielding reaches down himself "Why can't we friends now?" Aziz says he will be friend, but not now, not here, because at that time, the agenda was of a massive grand change in our lives with independence. But, of course, in that statement also was the positive echo of what we will do together in the future, as the rocks pass and horses come together again, and I think, that is exactly what is happening in more ways than one.

Several times since independence, and I think, most vividly in the last 4 years, what with our partnership, the very successful visit of the Prime Minister John Major to our country and our Prime Minister's visit to the UK. And I think that we could not really have had a better opportunity than this moment of reflection, for Sir Nicholas Fenn to be with us as he says good bye to us, but I hope he doesn't say for ever. I hope we will be seeing more of him in a different capacity, perhaps on a wider canvas, perhaps with a broader brush. But we will be there waiting, just as eagerly, to see the colour of his next painting, Sir Nicholas Fenn.

Sir Nicholas Fenn

I am honoured by your invitation to address this august institution this afternoon, and to do so in the very heart of the Ministry of Defence. Honoured - and puzzled. Why should so many distinguished military men invite a dip-

diplomat to speak to them? An Ambassador is well known to be a man who thinks twice before he says nothing. Or, worse, who tells his friends to go to hell in such a way that they look forward to the journey. Perhaps the answer is to be found in the instinctive generosity of the military mind. It was, I think, Cervantes who said that the Army is a school in which the niggardly become generous; the generous become prodigal; and the prodigal are court marshalled.

There is a third definition of a diplomat for which I am indebted to the eleven year old daughter of a colleague of mine who was asked by her teacher in school to explain to the class what a diplomat was. "A diplomat" said Alice, "is a mat laid down between two countries so that both sides can wipe their feet on it". It does not feel like that in India. In fact there are several good reasons for us to meet today to discuss India-UK Relations.

First, it gives me an opportunity to congratulate the United Service Institution of India on its 125th Anniversary and to celebrate with you your long record of study of security issues. The very foundation of the Institution in 1870 by General Sir Charles MacGregor proclaims that it comes from the cultures of both nations.

Second, I bring hearty congratulations also from your sister institute, the Royal United Services Institute of London, and its Director, Admiral Richard Cobbold, who suggests that you should celebrate your 125th Anniversary together with a Joint Seminar later this year.

Third, both I and Richard Cobbold rejoice with you on the imminent inauguration of your new building which will mark a watershed in the history of the Institution and will encourage greater debate on security issues in India at a time in the history of our planet when they richly deserve such study.

Fourth, you enable me to greet my many friends among officers, past and present, of the Indian Armed Forces, and amongst the alumni of the RCDS - still sometimes called the IDC - and the National Defence College here in Delhi. Many of these friends are in this room. My wife and I have been most grateful for your welcome and your friendship. We have felt at home because we have so much in common.

Fifth, I can pay tribute in this historic hall to the Indian armed forces, with which the British army in particular has so many historic links.

It would be remiss of me, particularly in this company, not to mention what I regard as a "Matter of Honour" if I may humbly borrow from Philip Mason. Last year marked the 50th Anniversary of the end of WWII. Too little

attention was paid to the magnificent contribution of the Indian armed services during that war. The renowned achievements of 4th and 5th Indian Divisions in the Desert and Italy, and of 17 Indian Division and the mainly Indian 14th Army in Burma, are but symbols of the achievements of the over 2 million Indians who served as soldiers, sailors and airmen on all fronts. The record speaks for itself.

We marked it in a small way by paying tribute to the Indian veterans on Remembrance Day, whilst also looking forward in a spirit of reconciliation. I was subsequently struck as I laid a wreath at India Gate and gazed up at the mass of names on the memorial arch of those who gave their lives, from all over India and the Commonwealth, how strong our historic bond was and the enormous debt that the British people and indeed the world owe to India. [One wonders what sort of world we would now be living in if the Lahore and Meerut Divisions had not been there to hold the line in France in 1914 and their successors at El Alamein and Imphal in WWII].

As I said the record speaks for itself. In WWI some 36,000 Indian soldiers were killed and 70,000 wounded and no less than 16 VCs and 99 MCs awarded. In WWII 23,400 were killed and 64,000 wounded, and 31 VCs, 9GCs, 252 DSOs and 1,311 MCs were awarded.

It is indeed, therefore, a Matter of Honour that before leaving India, I should reiterate the gratitude and admiration of the British people for India's contribution to a better world and pay tribute in Churchill's words to "The unsurpassed bravery of Indian soldiers and officers".

And this proud record has of course continued ever since the end of World War II. We celebrated it again on Republic Day two weeks ago.

Sixth, as you say, Sir, we are about to leave India after four and a half years of great delight and rewarding labour. I declare to you that our departure is not a voluntary act. The only good reason for leaving India is the obligation to retire from the public service on a date which is fixed not by one's zest for the job but by the mark on the calendar. Since I have known for about 58 years that my sixtieth birthday would fall next week, I cannot claim to be taken by surprise. My wife complains that retirement will mean twice as much husband for half as much money. But there is no appeal from the ultimate tribunal of old age. To that verdict I bow, and take my leave, and salute you as I go.

And, finally, these four years in India have been dedicated to developing the relations between our two countries; this is the subject you have asked me to address. I believe that I can report that they have never been better since

1947. So, Sir, I offer a valedictory report to the United Service Institution of India on the renaissance of Indo-British relations to which I have been a witness.

INDO-BRITISH RELATIONS

Most people in both countries still think of our relations as if they were stuck in their comfortable old groove. In fact they are qualitatively new because they are no longer based on the shifting sands of sentiment but on the sound rock of mutual interest. Britain and India have always been friends, because of our long historical association and the many things we have in common which we value: things to do with culture and language; things to do with institutions - parliamentary democracy, the Independent Judiciary and the Rule of Law, the Non-Political Public Service.

Not least among these, the non political military. Neither in India, nor in Britain, is a military *coup d'etat* imaginable: not all nations are so fortunate. Indeed, I agree with the recent comment of the great Sam Bahadur: this was perhaps the greatest achievement of your great Field Marshal Cariappa and there is no doubt that the Indian Armed Forces have always lived up to the oath at the Indian Military Academy, "The Safety, Honour and Welfare of Your Country comes First Always and Everytime".

These facts - cultural, constitutional and institutional - are hugely important elements in the national life of both nations. Indo-British friendship is part of the personal experience of each of us in this gathering. We can never truly be foreigners in each other's countries again. Sue and I testify: we have never felt foreigners in India.

I call this "Culture, Cricket and the Commonwealth". I say this not to disparage it - but to indicate that we have transcended it.

The truth is that for most of the period since India's Independence our respectful friendship has been tempered by radically differing views of the world: NATO and the Non-Aligned Movement: and by a frankly scratchy bilateral relationship.

Then three things happened: the end of the Cold War, which obliged governments all over the world to come to terms with new realities; Indian economic reform, which made India more interesting to Britain; and British economic recovery which made Britain more interesting to India. We have rediscovered each other.

And so, when Foreign Minister Douglas Hurd came to India in January 1992, he reviewed with his Indian colleague the traditional friendship between India and Britain and they pronounced it inadequate. As Mr Hurd said at the time, "our instincts and our interests begin to run together". In its place the two Ministers instituted a "structured dialogue" under which we have been consulting each other ever since about all manner of things. We talk to each other. Nay, we listen to each other. And it is different.

This structured dialogue has given birth to a range of other partnerships:

We have a partnership in the defence of democracy against terrorist attack and an Extradition Treaty and a Confiscation of Assets Agreement to prove it. In this company - the heart of India's military establishment - I thank the Government of India for the quality of its cooperation with the Ambassadors of the four hostage countries: consultative arrangements which are a model of their kind.

India will not pay. Britain and her partners will not ask India to pay: that way lies disaster. And the safety of the hostages remains for all five governments the primary consideration.

I say to Al Faran: the course you have chosen cannot secure your objectives. The courageous and honourable and compassionate course, in this holy season of Ramazan, is to let my people go.

I have noticed some criticism of the presence of foreign advisers in Srinagar. One paper described it as a "British Invasion of Kashmir". Two soldiers, two policemen, two diplomats. If we wanted to invade Kashmir, the battered old Imperial lion could still do better than that.

It is sometimes seen as a reflection on Indian capabilities. That is a profound misunderstanding. The agreed arrangements reflect the determination of five governments to address this together. Alas, we have much bitter experience. Two heads are better than one. What use is our much-vaunted solidarity against terrorism if we cannot stand shoulder to shoulder when the going gets tough?

We have, next an environment initiative and a forestry initiative which have enabled Indian and British delegations in international environment conferences very often to identify the common interest from among divergent trends.

We have a new Science and Technology Initiative and a bilateral agreement signed in Delhi last month by Mr Bhuvnesh Chaturvedi and Mr Ian Lang,

President of the Board of Trade and Minister for Science. This agreement establishes a joint research fund to promote collaboration between Indian and British research teams - initially in Communications, Agro-Industry and Advanced Manufacturing Technologies; it establishes a Trust to provide Technology Fellowships for young industrialists; it covers an agreement between the United Kingdom Biotechnology and Biological Sciences Research Council and the Indian Council for Scientific and Industrial Research; and much else besides. It should serve as an overarching framework to encourage and develop links between scientists and technologists in both countries and facilitate technology transfer in both directions - in my view the new growth point in our Partnership.

In India we have our second largest British diplomatic representation in the world. It manages the largest bilateral aid programme, increasingly reoriented away from flagship projects towards the grass roots: primary education; primary health care; slum improvement; the kind of forestry which begins with the people instead of the trees. We have the largest British Council operation in the world and its network of libraries and its work in culture education and health ensure that our traditional friendship is in good repair too.

There is one other element in our bilateral relationship which is sometimes overlooked - the growth of the Indian community in Britain, now a million strong, eight lakhs of them citizens of the United Kingdom. They add a welcome element of cultural diversity to our drab northern climes. The press of course highlights the problems: occasional racial tension; and the incursion into British politics of the issues of the sub-Continent. the underlying truth is different: the Indian community in Britain is increasingly large, increasingly successful and increasingly respected. It plays an important role in the revival of the British economy. It adds substance to the Indo-British relationship. And if it also increases the interest of British politicians in Indian affairs; you may agree with me that this is no bad thing.

But of course the heart of the change lies in the Indo-British Partnership Initiative, established by our two Prime Ministers in 1993. I do not need to labour this point because you know all about it. It is an industry-led partnership to enhance trade, investment and technology transfer in both directions. We started by banishing mutual myths: the Indian belief that Britain offered second class technology and the British belief that business in India was too difficult because of bureaucracy and red tape. We now know better about each other. And we have spread the gospel from the large companies to the medium and small companies where the true growth opportunities lie. So we had the royal Yacht Britannia and the Concorde and a host of business missions in both directions.

As you know, the results show:

- trade increased by 70 percent in three years and in both directions. It totalled £3 billion last year.
- investment up five times up in the first year and doubled again in the second year - that is tenfold in two years. It may now be 15-fold over three years.
- New joint ventures: 172 in year one, and 193 in year two, 158 in the first nine months of year three: that is 523 in the first 1000 days of the IBPI; more than one every other day: some small, some, large; all reflecting the new spirit.

I have no doubt that the initiative has now given place to an enduring Indo-British Partnership.

DEFENCE

And what of Defence amidst all this good news? I am glad to report that the last twelve months has seen dramatic progress. We now have a Defence Consultative Group, established on the suggestion of your Prime Minister that we set up a high level body to give increased momentum to the development of the defence relationship.

It had its first meeting in London in June, chaired by the senior civil servants from the two MODs' our Permanent Under Secretary, Mr Trevor Mottram and your Defence Secretary, Mr Nambiar.

This meeting reviewed a wide range of issues and agreed to set up 3 sub groups to take the work forward: the Military Sub Group (MSG), the Defence Equipment Sub Group (DESG) and the Defence Technology and Research Sub Group (DTRSG). The MSG subsequently met in November 1995 and the other two will meet shortly. The objectives of the DCG reflect the three sub groups and are, firstly, "To promote mutual understanding on strategic and security issues". This is particularly welcome. Security is a matter of perspectives and it is important in our new "global village" that nations understand each others concerns.

The second objective of the DCG is: "to facilitate greater familiarisation and increased opportunities for interaction between our two armed forces".

This is the primary purpose of the Military Sub Group and at its first

meeting in November it set itself the aim: "To considerably increase contact between the two armed forces in support of the DCG initiative, through the development of a three year framework of interactions and visits."

These are to include: senior level visits, young officer exchanges, unit affiliations, observers on and participation in exercises, exchanges on simulation, annual seminars, increasing links between the staff colleges and the academies, Exchange Officers, joint adventurous training expeditions and cooperation on doctrinal issues.

The third objective of the DCG is to: "Develop the potential for cooperation on defence equipment and research projects."

We have already been working hard on this, with a succession of System Missions over the last three years, including a Sea System Mission in April 1995. We have also had exchanges of views on all sorts of subjects, from the lessons of restructuring and privatising Royal Ordnance, to Quality Assurance.

Meanwhile many British firms are already working with the Indian defence industries, British Aerospace and Rolls Royce with HAL, Racal with BEL, and many others. This I believe is set to increase.

In addition to setting up the DCG, 1995 was marked by considerably more interaction and senior level visits than before.

In February we had the first annual Indo/British Army seminar, on the subject of Peacekeeping. It is with no small pleasure that I tell you that the Indian Army presentation on its operation in Somalia stole the show, and that the discussions also highlighted a great deal of commonality in our approaches. This was followed up with greater contact between the DSSC and Camberley.

We have a great deal to learn from each other. This was also put to good use in Angola, when Indian and British units served together for the first time, I believe, since the Korean war and rediscovered the old mutual respect that was evident on so many battle fields in the past.

In addition, our visitors to India included our Permanent Under Secretary, an Assistant Chief of the Defence Staff, the Director of Infantry, Comdt RAF Staff College, the Adjutant General, Director Land Warfare, Director Air Force Staff Duties and Director Naval Ops.

Indian visitors to the UK included the Additional Director General Staff Duties, DG Infantry, Adjutant General, COS Eastern Air Command, DG Quality

Assurance, C in C Western Fleet, Director General of the Coast Guard and Controller Warship Production and Acquisition.

There have also been 10 adventure training expeditions, including participation with other nations in the cross country ski-ing, climbing Mt Devi, white water rafting and mountain biking events, in the Indian Army's High Himalayan Expedition (HIMEX).

On the naval side there were 4 ships visits, including the largest PASSEX with the Indian Navy since the 1960s. The number of ships visits is also set to increase this year.

A few days ago you may have seen the Red Arrows pass through Delhi and we hope that will mark an increase in the number of contacts between our air forces.

1996 has also set off with a cracking pace with visits already by our Minister Defence Procurement, the Controller Navy and by HMS *Chatham* to Cochin. The Equipment and the Technology and Research Sub Groups meetings should follow shortly and then a series of reciprocal visits to keep up the visibility of our mutual intent.

You can see from all that, that the Indo/UK defence relationship is making up for lost time and is now usefully complementing the Indo British Partnership.

There is no lack of will on both sides to carry this forward. Good news.

CONCLUSION

But the press of course is not interested in good news. It is full of gloom and doom as usual: introspection and self doubt about the state of India. So, Mr. chairman, let me re-state for you before I go my four reasons for confidence in the future of this nation which has been such a hospitable home for us these last four years.

THE NATURE OF INDIAN SOCIETY

What strikes a foreigner about India 1991 - 1996?

First of course the eternal verities. It is a continent not a country, from Kashmir to Kanyakumari, from the Rann of Kutch to the mountains of Manipur and Mizoram. My wife and I have visited every one of your 25 states and

every union territory and can witness that the legendary diversity of India is true. It is still as Nehru described it in his famous book "The Discovery of India": "a geographical and economic entity, a cultural unity amidst diversity, a bundle of contradictions held together by strong and invisible threads. She is a myth, an idea, a dream and a vision, and yet very real and present and pervasive". So have I found her.

And of course you have problems built to scale: population - too many Indians - 932 million at last count according to the population clock, increasing every five years by almost twice the population of the United Kingdom. Poverty: 300 million in a state of absolute poverty - more than the whole of Africa and Latin America combined; and a larger middle class than the United States of America. Illiteracy, 50 per cent overall, perhaps 70 per cent female illiteracy which has something to do with the rising population. And all of this complicated, in President Sharma's memorable phrase, by casteism, communalism, corruption and criminalisation - all increasingly politicised. Here I allow myself to express the hope that Hawala, because it affects all the major parties, may yet provide the catalyst for the introduction of transparency into the financing of politics.

The saving grace is India's exuberantly free, and instinctively secular, society. It is one of the wonders of the world that you contrive to govern 932 million people as a functioning democracy. Nor is this just the Westminster pattern adopted by choice in 1947. That provides the form. But the underlying reality is 2000 years older in the habit of Indian villages to settle their affairs by democratic discussion between village elders. That in my view is why India is so profoundly democratic. That is the secret of your unity in diversity. And that is my first reason for confidence in the future of India.

INDIAN ECONOMIC REFORM

The second reason is the economic reform programme on which your government embarked in 1991. That year was a true watershed in Indian history. The process is "irreversible" as the Prime Minister says. India will never be the same again. Immense progress has been made in dismantling the licence Raj and opening the economy to market forces; in making the rupee convertible on the current account; and in welcoming foreign investment to stimulate development. Of course there is an outstanding agenda of things which need to be done. The rigidity of Indian labour laws needs to be reformed, not only because it is a disincentive to foreign investment, but also because it is a handicap to Indian industry as it tries to enhance its own productivity to face the new competition. Disinvestment needs to develop into true privatisation if it is to reap the rewards. The good start made in reforming the financial sector needs to be carried forward, particularly the liberalisation of insurance, not least so that the insurance industry can mobilise the capital

investment for the development of infrastructure. And above all, the policies proclaimed in parliament must be implemented at the grass roots and in the States if the fruits of economic reform are to be realised.

On all this I venture three comments. First, economic reform is massively in India's interest. Secondly, there is of course, as the Prime Minister says, a "Middle Way". But there is no Half-Way House. Only full liberalisation can deliver the benefits to all. Thirdly, economic reform is a necessary element in any programme to help the poor. Those who would help the poor must first generate the resources with which to do so. Economic reform can and will generate the resources to enable this nation to address its ancient problems - if the politics permit - and the politics are complicated.

It is said that economic reform is harsh on the poor. It is said that this was the reason why Congress has been losing State elections. It is also said, perhaps contradictorily, that there now exists an ideological consensus in favour of reform. My Finance Minister, Kenneth Clarke, visited India in the summer. He talked to the Congress government at the Centre, to the BJP government of Rajasthan, to the communist government of West Bengal, to the Shiv Sena government of Maharashtra and to the Janata Dal government of Karnataka. He concluded that there was not an ideological consensus. But there was something better: there was a common economic imperative. India competes for investment in the international market and cannot afford the luxury of economic nationalism. The States of the Indian Union compete with each other for the investment they need to deliver higher living standards. Chief Ministers of all political hues make pilgrimage to London, not because they love us, but because we need each other.

Whatever the verdict of the electorate in the Spring, I suspect that the thrust of economic policy will remain unchanged because it is in India's interest for this to happen. And that is my second reason for confidence in the future of India.

INDIA INTERNATIONAL

My third reason has to do with India's position in the world. India's size, strategic situation, cultural strength and population has made her a natural leader amongst nations. But with the end of the Cold War and the disappearance of the Soviet Union our comfortable certainties have vanished, the world has become a more exciting place and all of us have to confront new realities. Before we wring our hands over this in dismay, let us remember to rejoice at the things which have become possible in our generation: liberation in South Africa; peace in Palestine; with God's help even peace in Ireland.

The truth is that familiar postures are no longer enough for NATO or for

the Non-Aligned Movement. We need rigorous mechanisms to bring our policies into the service of our interests - British interests as defined by the British; Indian interests as defined by Indians.

Perhaps in this context I may be allowed to commend the well known definition of national security policy formulated by the former Chief of Army Staff, the late lamented General Joshi: "the creation of a secure environment for the development and progress of a free secular sovereign state that would guarantee its multi-ethnic, multi-lingual, and multi-religious population a secure and stable socio-political environment for the development of the Nation in the present and future global milieu." That is the kind of thing I mean by bringing our policies into the service of our interests. As seen by a foreign observer, Indian foreign policy has a number of new features. It is more assertive. It seeks permanent membership of the Security Council. It continues to denounce the Non-Proliferation Treaty. It begins to impose conditions on Indian support for the Complete Test Ban Treaty. Voices are raised in favour of declaring India a Nuclear Weapon State and deploying missiles.

It is said that India is encircled by fundamentalism. If you look at the map it is quite difficult to envisage India being encircled by anything. Islamic fundamentalism is indeed a problem for all of us in the world, not least for the Muslim States. But it is not aimed against India. And the problem is not by definition Islamic. The true enemy of civilisation is fanaticism be it Muslim or Hindu, be it Christian or Jewish. Wherever fanaticism is found, it is the enemy of peaceful society. I declare myself a fanatical anti-fanatic.

India remains deeply embattled with Pakistan. And pours out the flower of her manhood on that inhospitable Siachen glacier. Indo-Pakistan relations are worse and not better than they were when I came here in 1991. Kashmir remains a danger, not only to India and Pakistan, but also to the world. My Government looks for bilateral talks between India and Pakistan as envisaged at Shimla - and we observe that there are no such talks; we look for an end to material support for militants from across the border - and we observe that there is no such end; we look for a genuine political process in Kashmir with proper respect for human rights - and we observe that there is indeed progress on human rights but that attempts to launch a political process have been frustrated by circumstances.

-- On arms control, this is not the place to argue the objective merits of the Non-Proliferation Treaty to which my government stands committed. But I observe that the unconditional and indefinite extension of the NPT was achieved by consensus. In this matter India stands aside from the consensus of mankind - as she has every right to do - but it is not mankind that is out of step. Two nuclear threshold powers are divided by a profoundly emotive issue. The rest of the world cannot be expected

not to take note of this situation.

-- India is undoubtedly a great power. The question is what kind of great power will she be?

-- The kind of great power that elbows others aside for its place in the sun, oblivious to how large she looks to her neighbours?

-- Or a great power built in the mould of the greatness of Gandhi or Nehru? The world's largest democracy; a tolerant, secular society, home to the world's great religions and cultures; and a crusader for human rights?

My third reason for confidence in India is that I think I know the answer to that question.

INDO-BRITISH RELATIONS

My fourth reason for confidence is the renaissance of Indo-British relations to which I have been witness these last four years, and which we have already discussed.

John Major came to India in 1993 as your Chief Guest on Republic Day. As it happens, he came in the aftermath of the disaster which struck India on 6 December 1992 and made of his visit a deliberate British gesture of confidence in Indian economic reform and Indian secular democracy in time of trouble. And, with Mr Narasimha Rao, he established the IBPI. In a speech in Bombay before he left India, he told us what he thought they had been doing together. They had taken the old relationship and transformed it. They had banished the ghosts of an empire that nobody mourned, rejecting both nostalgia and resentment, and building instead a modern partnership between sovereign democracies, which is what we are.

I have been paid these last few years to make that dream come true. And it is coming true before our very eyes including in our defence relations. It would have been a delight to have been British High Commissioner to India at any time. But to do it now - when so many things are possible which were not possible before - that is a high privilege. It is a time of historic opportunity. Together we are creating a new relationship which, while cherishing our common heritage, yet builds upon it something qualitatively new; and enduring because securely founded on our mutual national interests; and for the same reason certain to grow.

1997

A parting shot about the future. 1997 will the fiftieth anniversary of that

midnight hour as the world slept and a nation woke to freedom. It is of course an Indian anniversary. And it is the jubilee also of Pakistan and of partition. There are those in India who say that there should be no place at such a time for those who shared and helped to shape the past. Imperialists keep out.

I respect such views. But I hope that they need not prevail. I should like to rejoice with you over fifty years of Indian independence; to celebrate with you our modern partnership; and to devise a spectacular programme of cultural and economic events transcending all that has gone before.

We shall not take Indian views for granted. But we shall be listening. Please tell me before I leave India whether a high-profile British participation in the celebration of 1997 would be welcome? Would be regarded as offensive? Or perhaps would be seen as the most natural thing in the world?

I thank you Sir for your courteous attention. I extend my best wishes to the USI in its 125th year. I hope to hear of your joint seminar with the RUSI to celebrate that; and that your new building will stimulate even greater debate on the crucial security issues facing India and the world. It is good of you to give me this opportunity to salute before I go, such distinguished members of the USI, the MOD and the Indian Armed Forces which I have come so much to admire.

USI GOLD MEDAL ESSAY COMPETITION - 1995 : RESULTS

On the recommendations of the Evaluation Committee, the USI Council during its meeting on 21 March 1996, selected the following officers for the award of prizes in the USI Gold Medal Essay Competition - 1995 :

Group 'A' - "INTEGRATION OF MINISTRY OF DEFENCE WITH SERVICE HEADQUARTERS"

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|-----|---|---------------------|-------------------------------|
| (a) | Col Kanwal Mago Military College of EME, Secunderabad | First Prize | Gold Medal and Rs. 2,000/- |
| (b) | Col Ivan David Military College of EME, | Second Prize | Rs 1,000 |

Group 'B' - "THE IMPACT OF SOCIAL, POLITICAL AND ECONOMIC CONDITIONS IN INDIA ON RECRUITMENT, TRAINING AND CAREERS OF DEFENCE PERSONNEL"

- | | | | |
|-----|--|---------------------|-------------------------------|
| (a) | Maj Niranjan Kumar School of Artillery Deolali | First Prize | Gold Medal and Rs. 2,000/- |
| (b) | Capt HS Kahlon CME Pune | Second Prize | Rs. 1,000/- |

Non-Military Threats to Security in South Asia

AIR CHIEF MARSHAL OP MEHRA, PVSM(RETD)

I am glad to be associated with this Seminar, a Joint J.N.U. and U.S.I. venture. Getting together of academics and servicemen is a welcome development. More of it is needed to educate our policy makers. The subject chosen, apart from being contemporary, should be of interest to policy framers of South Asia and those whose national interests demand that they be conscious of development in South Asia.

Interaction between academics, defence personnel, scientists, through the medium of such Seminars and even discussions at smaller formal and informal gatherings is vitally desirable and has the potential of sound policies being evolved. The logical follow up of such interaction is that it should be extended to a wide variety of disciplines and more so our policy echelons - politicians and the bureaucracy. The latter must accept the fact that phenomenal and galloping advances in science and technology call for a reorientation of the administrative structure which must do away with the generalist and induct a serious modicum of specialisation.

National Security has been the monopoly of defence services. It has been treated as a "holy cow" with no access to others than those connected with it in the Government. Thanks to the efforts of a few progressively minded, it has begun to be realised that National Security to be a success requires inputs from academics, industrialists, scientists, economists, environmentalists etc. This calls for greater and greater interaction between a multitude of disciplines amongst themselves and between them and the political leadership. The latter's association is most desirable because our political leadership is uneducated in issues relating to National Security and this vital segment takes little or no interest in this subject. The fact that during discussion on the Defence Budget (which consumes about 25% of our revenues) in Parliament, quite often the Speaker/Presiding Officers have to sound the quorum bell.

The generally accepted concept of the term National Security that evolved during the cold war defined national security as a function of the successful pursuit of Inter-State power competition. It was concerned solely with military

Text of the Inaugural Address given by Air Chief Marshal OP Mehra, PVSM, former Chief of the Air Staff and former Governor Bombay and Rajasthan at the USI-JNU Seminar on December 7, 1995.

threats or those related to an enemy. It was also used to convey the idea that a particular problem was of vital importance to the State and hence required the mobilisation of a wide variety of resources¹ - military, economic, industrial, social, etc. for the same to be tackled in accordance with the national interests/aspirations.

Security has its military and non-military dimensions. The former - military option in support of national security - is resorted to when other means of settling issues between nation states are exhausted.

Relatively speaking the security environment in South Asia has for some time been more relaxed than it was in the 1960s and 1970s when peace was disturbed due to China's aggression and the happenings which led to the emergence of Bangladesh as an independent nation State. Thanks to the misguided policies of the then leadership of Pakistan under the military dictator General Yahya Khan, India got sucked into a war which without a shadow of doubt grew out of internal conflict and contradictions in Pakistan. The sickeningly routine outbursts of Pakistani leadership against India with specific reference to Kashmir at various fora of the world and the unwarranted actions of the Inter Services Intelligence (ISI) in promoting terrorism in Kashmir and other parts of India, due to their obsession with Kashmir, relations between the two are far from satisfactory. India's stand that Kashmir is an integral part of India arising out of the accession option legally and constitutionally exercised by the then ruler, Maharaja Hari Singh - as was done by the other 500 princely states - and later categorically confirmed by the elected Government of Sheikh Abdullah is based not only on legality but morality. It is heartening to note that our Prime Minister has of late categorically stated that the "unfinished business" as far as Kashmir is concerned is the illegal occupation and annexation by Pakistan of northern territories across the Indus and in the extreme North butting Ladakh. These are an integral part of the erstwhile princely State of Kashmir. The sooner these revert to the rightful owners, the better for all concerned.

This situation coupled with some non-military factors is a source of serious concern to security in the South Asian Region. Our concern in this Seminar is the non-military threats to the security of South Asia.

I visualise the emergence and/or existence of such threats to the region due to -

- a) Terrorism, especially trans-border terrorism supported by hostile agencies in the neighbourhood and globally.
- b) The impact of drugs and narcotics which can be and have been known to be a major destabilising factor.

- c) Fundamentalism and religious fanaticism/bigotary as also sectarian issues.
- d) Population explosion and environment degradation - economic factors which include protectionism, debt burdens, economic exploitation, as a consequence of which the rich are becoming richer and the poor poorer.
- e) Erosion of governmental institutions and in consequence law and order.

It is unfortunate that Pakistan has chosen to carry on a war by proxy through resorting to irregular and unconventional methods of using violence in support of its ill conceived political aims. The redeeming feature is that the region has not seen a war since 1971. Despite the above, one cannot but help remark that the absence of war for over two decades cannot be deemed peace.

TERRORISM

Terrorism has many definitions but the one which has near-universal acceptance is that "terrorism is premeditated, politically motivated violence perpetrated against non-combatant targets by sub-national groups or clandestine state agencies/agents usually intended to influence an audience. Similarly, it is the one involving the citizens of more than one country.

The real threats to security in South Asia, however, arise out of proxy wars, externally supported militancy and trans national terrorism. The nuclear age has witnessed a transmission of conflict from the military regular wars, to more complex semi-military and irregular wars. The result has been that the irregular and unconventional warfare and support of armed militancy and terrorism across borders has come to represent an instrument of policy in Clausewitzian terms. At the same time spread of small arms and light weapons also threaten internal peace and security of states and societies.²

Pakistan's role with active support from the CIA represents the most extensive small arms - armed conflict phenomena in Southern Asia from where further cascading of small arms took place into the hands of quasi state and non-state actors. The fact that the U.S. played a major role in the supply of weapons to arm the Mujahideen resistance against the Soviet backed regime in Afghanistan has been spelt out by Brigadier Mohd Yousaf who was incharge of these operations in the ISI. He states "The CIA supported the Mujahideen by spending the American taxpayer's money, billions of dollars over the years in buying arms, ammunition and equipment". It is reliably learnt that the Mujuahideen received around 40 percent of these weapons and the balance was

siphoned off by the ISI³ to support its operations against India initially in the Punjab and subsequently and more extensively in J & K. They are doing so in the N.E. States of India also. In the recent past, Pakistan has and continues to support the Taliban with weaponry in Afghanistan again at the instance of the C.I.A. on the pretext of strategic threats to Pakistan. In short it is acting as a client state or as the pawn of "the super-power", which considers itself the policeman of the globe.

In the specific case of India, the hand of Pakistan's ISI in terrorist/militant activities along and within our borders utilising weaponry gifted to it for use in Afghanistan and revenues from the drug trade is too well known and documented to be repudiated by anyone.

DRUG MENACE

Annual profits generated by the narcotic industries are estimated at several hundred billion US dollars. The major production and trafficking complexes representing the world's most successful illegal enterprises in the Latin Americas, the Golden Crescent (Afghanistan, Iran and Pakistan) and the Golden Triangle of South East Asia (Cambodia, Laos, Thailand and Vietnam) are immune/impervious to enforcement programmes. During the 1980's globally production of opium more than doubled and the output of Coca leaves rose 300 percent.⁴

Some of the unwelcome trends in the strategies of narcotics enterprises are - widening economic influence, that is, the impact of the illicit drug trade on illegal economic structures and processes in major producing and transit countries: the increasing political corruption in such countries leading to absence of authority⁵, the growing intrusion of narco criminal enterprises into the realm of the state and the law, a situation which amounts to delegitimization of government; the successes of narcotics businesses in innovation, avoiding detection, and increasing operational efficiency; and especially the increasing transnational cooperation among criminal empires that deal in drugs. The enhanced power and reach through the development of new and advanced capabilities as also the establishment of new avenues of operation and support are very much in evidence.

There is no denying the fact that the drug trafficking is instrumental in having adverse impacts on the political and administrative systems in the developing countries. Narcotic syndicates operating in such countries as Burma, Afghanistan and Columbia are active in anti-state violence and the denigration/disintegration of national authority. Jose Toft of the U.S. Drug Enforcement Agency in Columbia has stated, "I cannot think of a single political or judicial institution that has not been penetrated by the narco traffickers. I know that

people don't like to hear the term "Narcodemocracy" but the truth is its very real and its here."

There is undoubted evidence that drugs and arms are synonymous. What emerges as a clear corollary is that it is not possible to control the spread of arms without an effective corresponding control over drug trafficking and money laundering. Convenient banking laws in certain micro states provide the conduit to convert drug profits into investible cash. The Bank of Credit and Commerce International (BCCI) which has been indicted to have engaged in money laundering had its headquarters in the Cayman Islands and Luxembourg in Europe. The drug trade is backed by armed gangs to give protection to distributors, to enforce verbal transactions, to subdue and intimidate law enforcement agencies and to terrorize politicians and informers. As a consequence, in many countries the narcopower either tries to co-exist with the State power or, where possible, to overawe and subdue the State itself.⁶

In some regions of Latin America and Asia, drug trafficking interests/syndicates for all practical purposes are the law, since the Government does not and cannot exercise real sovereignty in those areas. Nearer home Drug Baron Khan Sa's Shan Estate Enclave in Myanmar (Burma) represents perhaps the most prominent modern example of narcolordism.⁶

The disturbed conditions on the fringes of India especially in the Northwest and North East corners which are geographically closer to the two major narcotic areas of the world - the Golden Crescent and the Golden Triangle are ominous. Some of the problems endemic in those areas are possibly supported by revenues derived from the drug trade. The same is the case with differing impact in the other South Asian States.

COMMUNAL AND ETHNIC CONFLICTS

Conflicts between communal groups and States as also ethnic conflicts within national frontiers present major challenges to the South Asian Region.

Contemporary movements for secession or regional autonomy are strongly motivated by a desire to protect and assist group identity be it ethnic or communal. Such demands are prominent where sharp cultural differences exist between the dominant group and those in a minority. Generally speaking, the strongest demands of ethnoclasses or communal contenders are for greater and quite often unreasonable rights within society. Discrimination, if in existence, motivates demands for political and economic rights. On the other hand, cultural differences prompt demands for protection of the groups social and cultural rights. With the emergence of independent states in South Asia and the

Middle East, communal and ethnic conflicts steadily increased. Since the early nineties there was a visible decline in some of the areas, e.g. Kurds in the Iraq-Iran region and non-Burmese nationalists in Burma. Unfortunately, the situation in Afghanistan, Pakistan, India, Bangladesh and Sri Lanka continues to range from unsatisfactory to far from encouraging.

Ethnonationalist issues have been escalating into deadly and protracted conflicts and proxy wars. Such conflicts are fought with a fanatic fervour because communal and ethnic demands for independence imply the break-up of existing states and failing that a continued state of instability, unless satisfactory solutions which essentially entail compromises are evolved through mutual consent. Compromise arrangements in such cases call for division of power and responsibilities between contending parties. These entail delicate balancing of ethnic and communal demands on the one hand and interests of sovereign states on the other. Most politically assertive minorities desire access to political and economic opportunities and protection of their rights in existing societies and states.

The only ethnonationalists who won independence from the existing state were the Bangladeshis whose independence was achieved at the price of political mass murders and India's intervention.

It is my fear that South Asia may have to contend with an escalation of communal and ethnic conflicts. Long standing conflicts confronting Pakistan, Sri Lanka, Bangladesh and India have in the recent past intensified both within the states and across established frontiers. The danger is that conflicts such as the ones in Kashmir, the North Eastern States of India, the Sindhi and Baluch aspirations in Pakistan, the disturbances in Bangladesh which have resulted in migration of millions into India primarily towards the North and North East and the Tamil problem facing Sri Lanka can spill over into neighbouring states. Such situations militate against security in the entire South Asia region and are fraught with consequences of a magnitude which we can ill afford at this juncture, when the need of the millions stand jeopardised.

ECONOMIC FACTORS

Almost all the states comprising South Asia are among the economically weaker members of the international community. Abject poverty is the result of inadequate financial resources, a legacy of the past several hundred years of colonial rule, fueled by enormous pressures resulting from an uncontrolled explosion of population. The latter is primarily responsible for the denial of basic amenities necessary for human development. It is unfortunate but true that supply is outstripping demand and nation states of South Asia are unable

to generate adequate financial resources to provide even the most vital basic need - provision of drinking water - to the hundreds of millions that inhabit this sub-continent.

South Asia has a population of over one billion which is growing at an average of over 2 per cent per annum. Of the billion and more, the population of the major segments, India, Pakistan and Bangladesh is 913.07, 131.5 and 118.7 millions respectively.

Since the Sixties, while the birth rate has declined by a little less than one third, the death rate has declined by one half. This differential explains the current population pressures in the region.

When the above is viewed in relation to the growth of resources to meet the ever increasing demand for food, clothing, health care, education, basic civic needs, the picture is dismal and calls for super-human efforts to stem the rot.

Successive governments have made unsuccessful attempts to ensure development even at the cost of imposing heavy debt burdens by borrowing, both internally and externally. Currently the situation amongst SAARC countries is that the debt burden is assuming astronomical figures - India 70,115, Pakistan 20,683, Bangladesh 12,248, Srilanka, 5,851, Nepal 1,621 and Bhutan 83 million dollars. The stage has in some cases reached a point or is very close to it that the debtor countries are and will soon be unable to meet even the interest liabilities leave alone be in a position to serve capital repayment requirements.

About 4 years ago when I was in China, I had the privilege of attending a function organised by the Ambassador. At this function I met some Chinese intellectuals and economists. Whilst making small conversation. I asked one of them, who appeared to be the leader amongst them, "How do you reconcile communism and market economy?". The response was, "Are you a Communist?". I replied in the negative; whereafter he asked me, what in your judgement is communism? I told the individual that Communism is centralised control over every aspect of national existence including human beings and in this connection I referred to the Chinese dictat of having one child per family. The individual's response was "Communism is good of the people". If market economy is good for people we will adopt it. He went on to say the world is unduly perturbed about the one child norm and asked if the one child per family norm is in the interest of the family, the people and the nation or not. With the success of this policy we will have lesser mouths to feed, educate, clothe, house and find employment for. Why is the world's conscience disturbed over what is good for China?

On a query about the entry of multi-nationals into the country, I was told that the entry of multi-nationals was in the shape of joint ventures in which the Chinese equity was represented by land and the multi-nationals who wish to operate in China have to bring in their own money. He went on to say that as a consequence we avoid borrowing to a large extent thus keeping the national debt through international borrowings under check. This is contrary to India's policy which is leading the country into an unbearable debt burden. China is insisting on multi-nationals to bring the total money required for their investment and that such a move does not entail any national debt burden. The Government imposes certain conditions on the foreign investors e.g. employment of Chinese in all enterprises, use of Chinese materials in the construction of various ventures, the non-repatriation of money till the enterprise makes profit. I gathered the impression that such projects were on the basis of build, operate and earn money which can be permitted to be repatriated.

I feel such a policy can be adapted by us in India. This aspect needs very serious consideration at the hands of our Government as it would be instrumental in the debt burden not reaching the astronomical proportions that it threatens to do.

Developmental activities undertaken in an attempt to ameliorate the lot of the havenots in developing countries utilising resources raised by the State have been instrumental in modernisation and socio-economic development and in consequence spread of literacy and more importantly higher education. The unfortunate fact is that the normal aspirations of the havenots have not been satisfied because modernisation and development have perpetuated economic inequalities. Worse, the quantum of educated unemployed has risen. This has been instrumental in educated unemployed becoming part of the problem of unrest, criminalisation and violence.

Developments in Sri Lanka where university graduates spearheaded upheavals in 1971 and 1979 is relevant. Nearer home the educated youth revolted in Assam when the ruling elite failed to stem the problem of large scale migration from Bangladesh which led to deep rooted fear in the minds of the educated Assamese. They feared job opportunities for the locals would shrink and pressures on the available resources would become acute. They also foresaw the Assamese becoming an ethnic minority in the land of their forefathers.

Peace can only be assured if the aspirations of the people are satisfied, if not totally at least in respect of basic human needs - food, shelter, clothing and health care. Added to this is the crying need for education which would in turn help to solve many a problem provided infrastructural development keep pace. The absence of the requisite infrastructure - power, communications,

transportation, etc. would restrict growth and in turn employment potential. It is unfortunate but true that developmental activities suffer due to lack or inadequacy of coordinated planning. A recent news item in the *Hindustan Times* highlighted the fact that food grains awaiting export could not be moved from Punjab to Kandla where ships were anchored in the harbour because rail wagons were not available and truckers were refusing to carry the goods by road because the Ministry of Transport had placed a ban on the carriage of more than 9 tons in a truck. This was contrary to the existing practice which involved overloading of trucks to earn more money. The response of the Railway Ministry according to the news item was that they were lifting the ban on manufacture of wagons in the Private Sector. The havoc that this situation will create can best be imagined and shows how unprepared we are to meet our export commitments and the hollowness of coordinated thinking. One could quote endless examples which are a reflection on the attitude of our political leadership and the bureaucracy which is refusing to move with the rapidly changing economic scenario - the result of "liberalisation" so much being talked about. The chasm between intentions and implementation is appalling.

ENVIRONMENTAL FACTORS

Coupled with the above is yet another issue, namely degradation of the environment. This has been highlighted at various fora because of its universal potential for chaos and disorder. The importance of this has been appreciated by the United States of America. It has adopted environmental security as part of national security policy. Its national security objectives include "assuring the sustainability and environmental security of the planet". It is time developing countries, where destruction of the environment is fast leading to huge tracts of land becoming unproductive, took serious note of this vitally important issue. Lack of attention to galloping pollution is undermining the vitals of the citizens and the well being of future generations. In an article in *The Atlantic*, Robert Kaplan opined, "that chaos will emerge as the main threat to global security in future decades." He went on to say that, "population growth and resource depletion would prompt mass migrations and incite group conflicts in Egypt and the Indian Sub-continent."

In 1972, during the Stockholm UN sponsored Environmental Conference, the then Prime Minister of India, Mrs. Indira Gandhi, said that, "poverty was the biggest polluter. Rain forests which form a major carbon dioxide sink are being cut down because of the population pressure ... The population explosion also leads to economic refugees and influx of population into neighbouring countries creating tension." Unfortunately even after a lapse of over 2 decades the situation if anything is worse. Here is food for thought for South Asian nations.

Non-military threats mostly arise out of changes in political and social consciousness and perspectives, in economic inequalities, which accentuate and divide between the haves and havenots, in technologies which provide new tools and capabilities, in life styles of people⁷ at the cost of basics for their brethren, the adverse impact on the ecology of the world, resulting in less and less for more and more and finally fundamentalism and religious bigotry. Add to this the spread of rampant corruption at all levels so much in evidence in this region. This in turn becomes instrumental in the breakdown of institutions - the executive, the judiciary and the law enforcement agencies. The biggest casualty in such an environment is without a doubt the absence of the rule of law which is the cornerstone of democratic systems.

By all accounts the existence of such a dismally poor picture carries the potential of unrest amongst the people leading to the type of situation so evident in some countries of the African continent.

South Asia faces all these and some other challenges to security in the region which can best be tackled through wisdom and statesmanship exercised without fear or favour. This will also call for a change of attitudes. In this connection it is apt to quote K. Subrahmanyam "History is a record of struggle between change and resistance to change and it has not been possible to halt change". I sincerely hope that the powers that be would become instruments of change and harbingers of peace and prosperity in the region. Failure to rise to the occasion by the rulers and the ruled can best be imagined.

I have every hope that deliberations during the next two days will generate adequate food for thought and inspiration which will help South Asia's policy makers to tailor their strategies towards reducing causes of tension and concern to the man in the street. And finally, let us all hang together for failing that we would, as nations, be hung individually by pressures generated by the millions who inhabit this region.

NOTES:

1. Gareth Porter, "Environmental Security as a National Security Issue" in *Current History*, May 1995, pp 218-222.
2. Jasjit Singh (Air Cmde) "Perspectives on South Asian Security"
3. Ibid.
4. Renseelaer W Lee III, "Global Reach: The Threat of International Drug Trafficking" in *Current History*, May 1995, pp 207-211.
5. Ibid.
6. Ibid.
7. K Subrahmanyam, "Non-Military Threats to Security" in Jasjit Singh and Thomas Bernawr (Eds) *Security of Third World Countries* (UNIDR-1993) pp 37-56.

Restructuring the Armed Forces

LT GEN A M VOHRA, PVSM, IA (RETD)

While accepting that war is no longer a viable instrument of policy, dependance on the strategy of military superiority continues to prevail as the guiding principle of states in matters of national security. The armed forces continue to be essential apparatus of a state and need to be well manned, well armed, well trained. However, the change of emphasis in their role, to prevention of war, as well as the place of military power viz a viz national integration/internal strength of a nation and economic power, are factors that should, among others, influence their shape and size.

In view of the past armed conflicts with Pakistan and China, the armed forces of India have grown considerably over the years. There has been a competitive Indo-Pak build up resulting in the strength of the two armies going up from 10 and 8 divisions in 1962/63 to 25 and 22 divisions in 1994/95. In addition, India has ten mountain division for the northern border. This vicious cycle has to be checked and India has to give the lead. It has an edge over Pakistan in the three services, Army, Navy and Air Force and can afford to initiate reduction bearing in mind a realistic threat assessment as opposed to worst case scenarios. This is bound to be reciprocated by Pakistan as it is also subject to severe financial constraints.

After the NEFA (now Arunachal) debacle of 1962, India raised ten mountain divisions for the northern and north-eastern mountainous border. A separate organisation for these regions will continue to be a necessity. In view of disadvantage of terrain on the Indian side of the northern border and the severe climatic conditions, the scope of any offensive operations planned, and an offensive is an essential element of all defensive campaigns, will have to be restricted and the strength of forces reviewed. The White Paper recently released by the State Council (Cabinet) of China claims that by 1987 the PLA strength was reduced from 4.238 million to 3.235 million and to 3.199 million by 1989.

For some years now there have been references in the defence debate in the country to obsolescence, poor fitness states and meagre allocation of funds for acquisition or replacement of weapon systems. Allocation for defence has decreased from 3.59 per cent of the GDP in 1987/88 to 2.53 per cent (E) in

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1994/95¹. With the inevitable and desirable emphasis on the social sector, education, health and housing, as also the continuing need for subsidy for the Public Distribution System, it would not be prudent to plan on more than 2.5 to 3 per cent of the GDP for defence. This will not permit us to sustain an Army of 35 divisions and an Air Force of 800 combat aircraft. Besides, our armed forces are men-intensive; pay and allowances and other personnel related expenditure takes upto 65 per cent of the defence budget. The services need to look at this aspect carefully. The total manpower is 1,265,000. The Army in particular needs to reduce its total manpower from the present number of 1,100,000. It also needs to restructure its basic formations especially in respect of the field force earmarked to operate in the plains, reduce its manpower and provide it mobility to keep pace with its armoured element. The Air Force must ponder over the optimum number of combat squadrons and aircraft. It will not be possible for it to replace obsolete aircraft one for one as the present fleet wastes out. Navy too must carry out an analysis of the affordable size and composition of its fleets.

The *Asian Strategic Review 1993/94* brought out by the IDSA shows that for the year 1993 the defence expenditure was 26.52 per cent of the total government expenditure in respect of Pakistan and 23.8 percent in respect of China and only 8.45 in respect of India.² (Actually the Indian figure of 8.45 is for 1994 but the 1993 is about the same or slightly less as the 1993-94 curve is almost flat). It also gives soldier-citizen ratio which per thousand is 6.55 for Pakistan, 2.69 for China and 1.23 for India.³ While relevant, these figures cannot be an argument for an increase in defence expenditure or in the size of our armed forces. Besides the fact that Pakistan is a smaller country with about 1/7th India's population and has much smaller economic base, the size of India's armed forces and their structure should surely be based on its objective assessment of threat in the coming 20 years or so, as also its national goal of building an integrated nation that is economically robust and, in which, meeting the basic needs of its masses gets a rightful place.

THREAT PERCEPTION

PAKISTAN

Pakistan has worked itself into a state of emotional frenzy on the Kashmir issue to the complete disregard of nation building. Almost 49 years after the establishment of the state those most responsible for its creation are still Mohajirs (refugees), who have not been integrated and go to the extent of talking of a separate state. Strong arm methods to suppress the Mohajir Qaumi Movement (MQM) is not succeeding; Karachi, the commercial capital of Pakistan, is no where near a state of normalcy and the economy of the country

is suffering. The President of Pakistan is reported to have urged the PM recently (Oct/Nov 95) to open talks for reconciliation; the previous rounds having lacked any sense of purpose. The PM appears to have a one point agenda : the merger of the Srinagar Valley. The proxy war being waged may not be a deliberate attempt at a diversion but it is clearly diverting the attention of the government to acquisition of territory which is not likely to accrue to it.

The recent arrest of Maj Gen Abbasi and 35 others brings forth the possibilities of a rift in the ranks of the Army among those who, after the prolonged experience of military rule, support the continuance of the democratic set up, albeit with a special role for the Army and an important say for the COAS in matters political, and others who would like to see greater support/ participation in the Srinagar Valley.

Most of the 36 army officers arrested for planning a coup have been formally charge sheeted. Conspirators had planned to strike on September 30 during the corps commanders conference under the COAS. They are reported to have had links with fundamentalist Jamaat-e-Islami chief, Qazi Hussain Ahmed, who would like to see a Jihad in Kashmir. After arresting the top brass and taking over, the government was to be dismissed and martial law was to be established "to reorient Pakistan's military policy in Kashmir", as put by a columnist from Karachi.

Gen Zia-ul-Haq had introduced Islamic thought at the training establishments right upto the Command and Staff College. Promotions came to depend on displayed interest in religious matters. In the words of the Karachi columnist, M.B Naqvi, what Zia-ul-Haq sowed from 1977 onwards is being reaped : a substantial portion of the officer corps is imbued with quasi fanatical Islamic zeal.

Pakistan is an old ally of the USA; since the mid fifties, when it formed part of the cordon sanitaire around the 'evil' communist empire. It was a means of access to China in 1970/71 and, in the early eighties, it responded to oppose the Russian forces in Afghanistan. Robin Raphael, the Assistant Secretary of State for South Asia described this relationship aptly at the public hearing of the Senate Foreign Relations Sub Committee on September 14, 1995 when she referred to "a country and people who have been loyal friends of the United States over the decades". Of course Pakistan had its own agenda and cultivated China while an active member of the Western bloc fighting communism and received massive arms aid from the USA ostensibly to fight communist forces.

In the US scheme of things this "large moderate Islamic democracy" as

Robin Raphael put it, has a role. According to her, five years of sanctions had cut off contacts and might make Pakistan military look elsewhere. "Pakistan", she said, "stands in danger, overtime, of drifting in directions contrary to our fundamental interests and its own". In these circumstances, the Hank Brown amendment aimed at "creating a sense of faith restored and unfairness rectified".

The fundamental US interest referred to above includes the containment of Iran. It also includes securing the vast energy reserves in Central Asia. Benazir Bhutto is keen to play this role and indeed claims that Pakistan is a frontline state to contain extremism. However, the USA is not unaware that this claim may be beyond performance. According to MB Naqvi, "the Americans rightly regard Pakistan as a storm centre of Islamic fundamentalism. Americans have had their share in promoting it. Throughout the 1980s Afghan war, Islamic parties were funded and armed liberally through Pakistan Army."⁴ Saudi Arabia and other Gulf Sheikdoms funded the setting up of the Islamic University in Islamabad. Two Egyptians and one Jordanian detained over bomb blasts at Egyptian embassy at Islamabad on November 19, 1995 are said to be students at this University. Egypt had earlier accused Pakistan of training militants who had gone to that country. During the Zia regime foreign elements were welcomed to establish a fraternity of Islamic fighters, writes M.B. Naqvi, "organisational and intellectual infrastructure was reportedly provided by Jamaat-e-Islami and other religious parties. Peshawar had become the general headquarters of Islamic revolution for the whole world".⁵

The US foreign policy in the Gulf region has landed it in a situation of confrontation with two major actors; Iran and Iraq. This forces it to make the most of all possible options to buy time. Bolstering Pakistan is one such option, which can succeed only if fanatical zeal in certain quarters of the country can be controlled and energies diverted towards national integration and economic development by the solution of the Karachi imbroglio. Benazir Bhutto may be amenable but can she/will she be allowed to deliver?

In these circumstances India has to plan on the continuation of the ongoing proxy war in Kashmir until the people of J and K accept a political solution. The fact that over 5 years of this confrontation has not led to open hostilities between India and Pakistan is a desirable proof of the reluctance of both countries to resort to war to force a solution.

The line of control (LOC) from near Kargil and beyond to near Uri and in the Punch sector is mountainous and unfenceable. It could be mined but as this entire region is subject to heavy snow-falls, mines laid would shift when the snow melts and be a hazard to own troops as well as the locals who venture up in the summer months in pursuit of normal livelihood activities. Having

spent some years of my youth in the areas of the Tithwal and Uri sectors with innumerable galis (passes), let me say that infiltration can be minimised by making it dangerous but cannot be stopped. Sneaking in by militants in ones and twos is more difficult to deal with than an assault by a larger body of troops. The talk of giving the Army a free hand and of eliminating terrorism shows only the lack of understanding of difference of operating in circumstances of a war and an insurgency where one cannot be trigger happy. The security forces are doing all they can, the answer lies in a political solution with the people of J and K. An important step towards this is to facilitate talks among the political elements of all parts of the state so that the people of the valley realise that the aspiration of all parts have to be taken cognisance of and that these are different. The Valley is important but is not the entire J and K. Talks among the political leaders of the Valley, Ladakh, Doda, Jammu and Punch will make it clear that, to ensure the unity and integrity of the State, there has to be give and take; a compromise.

In as far as the threat from Pakistan in the foreseeable future is concerned, open hostilities are unlikely but must nevertheless be catered for. The first point in this regard is to remember that the war will not be restricted to J and K and that the crucial battles will be fought on the Sind-Rajasthan sector where manoeuvre is possible and not in the mountainous terrain of J and K where operations are slow moving and subject to stalemates. This is not to gainsay the absolute necessity of planning offensive operations in that sector also so that, if war is forced on India, it is carried to Pak/POK territory. Such operations can best be carried out by standard formations as one approaches plains across the LOC. There is, therefore, no case for adding to our mountain divisions. On the contrary, on consideration of the threat on the Sino-Indian border, there may be a case to reduce their number.

India's security concerns are not limited to its threat perception vis-a-vis Pakistan. The armed forces are therefore structured to meet other likely threats from the North and East also. The result, therefore, is that, in relation to Pakistan alone, there is considerable superiority. This serves as a deterrent in as far as Pakistan is concerned. The comparative tabulation below will make this point clear.

**Tabulation of the Forces of India and Pakistan
extracted from the Military Balance 1994/95**

| Army | <i>India</i> | | <i>Pakistan</i> |
|-------------|--------------|--------------------|-----------------|
| | 1,100,000 | Total Manpower | 5,20,000 |
| | 2 | Armoured Divisions | 2 |

| <i>India</i> | | <i>Pakistan</i> |
|--------------|----------------------|-----------------|
| 1 | Mechanised Division | - |
| 22 | Infantry Divisions | 19 |
| - | Area Command Div | 1 |
| 10 | Mountain Divisions | - |
| | Independent Brigades | - |
| 5 | Armoured | 7 |
| 7 | Infantry | 9 |
| 1 | Mountain | - |
| 1 | Airborne/Commando | - |

The above figures of army formations will give a clearer picture of relative strength if the number of major units of the main fighting arms as well as major weapon systems are compared.

| | | | |
|------------------------|----------------------------|-----------------------------|----------------|
| 355 | Infantry Battalions | Numbers not given in the MB | Approx 220 |
| 55 | Tank regiments | | 35 |
| 290 | Artillery regiments | | 130 |
| 3400 | Main Battle Tank | | 1950 |
| 900 | Armoured fighting Vehicle | | 820 |
| 157 | Armoured Personnel Carrier | | |
| 3325 | Towned Artillery Piece | | 1566 including |
| including 550 x 130 mm | | | 200 x 130 mm |
| 410 x 130 mm | | | 30 x 155 mm |
| | | | 26 x 203 mm |
| 80 x 105 mm | Self Propelled Artillery | | 50 x 105 mm |
| 100 x 130 mm | | | 150 x 155 mm |
| | | | 40 x 203 mm |

It will be seen from above that only in respect of self propelled artillery, Pakistan has an edge (240 : 180).

| <i>Navy</i> | <i>India</i> | | <i>Pakistan</i> |
|-------------|--------------|--------------------------------------|-----------------|
| | 15 | Submarines | 6 |
| | 2 | Carriers | - |
| 23 | | <u>Principle Surface Combatants</u> | 9 |
| | 5 | Destroyer | 3 |
| | 18 | Frigates | 6 |
| 40 | | <u>Patrol and Coastal Combatants</u> | 13 |
| | 15 | Corvettes | - |
| | 6 | Missile Craft | 8 |
| | 7 | Offshore | |
| | 12 | Inshore | 5 |

| Air Force | <i>India</i> | | <i>Pakistan</i> |
|-------------------------------|--------------|-----------------------|-----------------|
| | 799 | Total Combat aircraft | 430 |
| | 36 | Armed Helicopters | - |
| | 22 sqns | Fighter Ground Attack | 7 sqns |
| | 20 sqns | Fighter | 10 sqns |
| | 2 sqns | Recee | 1 sqn |
| | - | ASW/MR | 1 (4 Atlantic) |
| (8 Jaguar with Sea Eagle) | 1 | Maritime Attack | - |

In his testimony to the senate Foreign Relation Sub-Committee on Near Eastern and South Asian Affairs on September 14, the Deputy Assistant Secretary of Defence, Bruce Riedel, stated that of the above figure of 799/430, the number of top-of-the line fighters with India and Pakistan are 270 (36 Mirage 2000 + 80 Jaguar + 100 MIG 27s and 54 MIG-29s) and 123 (35 F-16 + 30 Mirage III + 58 Mirage 5).

The Tabulation above is by no means comprehensive but does cover the important elements of the armed forces of the two countries.

The Hank Brown amendment is a one time waiver of the Pressler sanctions. On the face of it, it is a one shot affair. Pakistan will get military equipment worth \$ 368 million sold to it 5 or more years ago. It is not a resumption of regular military aid or sales. Nor does it imply the resumption of economic aid with the IMF and the World Bank having black balled Pakistan. However, with the sentiments expressed by the US officials, development of regular arrangements and economic aid would appear to be very much in the realm of possibility. How else would it be possible to address the concern of the State and Defence Departments regarding Pakistan military's top brass looking elsewhere and the country drifting in directions detrimental to US interests?

By the US Administration's past record it is also clear that concern for nuclear proliferation goes by the board if it stands in the way of perceived national interests. The Presidential certifications in 1987, 1988 and 1989 are cases in point. Hank Brown amendment too is a case in point. Senator John Glen said so during the debate and called it a "pro-proliferation" legislation. No score should be set on denial of arms sale to Pakistan on this count. However, it is not likely to be of the scale of either the late fifties or the early eighties.

It is necessary to discern both the impact of the military hardware coming to Pakistan as a result of the Brown amendment and the future possibilities of arms built up in Pakistan. Immediately, or rather in the near future, it will get

three P-3C Orion maritime patrol aircraft, 28 Harpoon antiship missiles, 360 Sidewinder missiles, 24 M-198 howitzer 155 mm, 18 C-Nite modification kits (which will enable the Cobra helicopters to fire their TOW anti-tank guided missiles at night or in poor visibility conditions) and spares for the existing F-16 fleet. Of these, it is only the maritime patrol aircraft (three P-3C Orion) and night firing capability (18 C-Nite Kits)/that are systems not held by Pakistan so far. India has Sea King helicopters armed with Sea Eagle anti ship missiles but does not possess night fighting anti tank guided missile capability. Senator Brown is correct in saying that there is nothing in the above package that threatens regional military balance which is in India's favour. The observation that by today's prices the arms being supplied are worth \$1 billion is not relevant.

Other possibilities of induction of hardware by Pakistan projected so far include 30 to 40 Mirage 2000-5 from France (Price tag of \$ 2.25 to \$ 3 billion), 30 MIG 29, a number of T 72 tank and some warships including an aircraft carrier as a part of a multi million dollar defence deal with Ukraine. Negotiation for the Mirage deal are reported to be taking place. The arms deal with Ukraine is yet to be confirmed. It is not quite clear where the money is going to come from. In any case, the comparative tabulation of the military strength of India and Pakistan shows that these supplies and projections need not cause undue concern in that India's present capabilities are adequate. Future developments should be carefully observed. While it would be prudent to be vigilant, temptations to indulge in a competitive arms build up must be overcome. India should restrict itself to acquisition of selective force multiplier systems. It should review its force levels and revise as well as restructure these reducing manpower and increasing mobility. Over a 15 to 20 year period a run down in the number of army formations and major weapon systems should be planned.

CHINA

It is generally believed that the real strategic challenge to India is from China. It is an established global power with an enlarging economy and improving military capability. It is a nuclear weapon state (NWS) and a permanent member of the UN Security Council. Although imbued with the concept of the Middle Kingdom, it has shown pragmatism by being inward looking and concentrating on economic growth and on modernisation so as to establish its place in the community of nations. Towards this end, it continues to need peace but is assertive in respect of its vital interests like Taiwan, the South Sea Islands and Tibet.

The asylum given to the Dalai Lama by Delhi is on the condition of

constraint on political activity. Apart from this issue, on which India has been sensitive to the Chinese concern, there is the Sino Indian boundary dispute. This has now been put on the back burner since the Rajiv Gandhi visit of 1988 and Sino-Indian relations have improved steadily since. This process has been continued by Prime Minister Narasimha Rao and there has been a leap forward in the way of the agreement to ensure peace and tranquility on the border. At the last meeting of the Joint Working Group held at Delhi in 1995, an agreement was reached that both sides will withdraw their posts from Somdrong Chu.

Both China and India continue to take measures, like exchange of visits, enlarging trade, and opening border trade on some of the traditional routes. There is agreement on a wide range of measures to develop and expand trade, economic and technical cooperation. After the recent visit of Qiao Shi, Chairman of the Standing Committee of the National Peoples Conference (Third highest ranking politician) in November, 1995, other visits are to take place. A joint venture (China, South Korea and India) to manufacture a 100 seater passenger aircraft is being considered.

China is modernising its armed forces. It has reduced its total manpower. As stated earlier, according to the White Paper released by the State Council (Cabinet), the strength of the PLA was reduced from 4.28 million to 3.199 million by 1989. On the other hand, it is upgrading its weapon systems both by indigenous production and external procurement such as 26 SU-27s and 8 Cobras. Its Navy has expanded its blue water capabilities. There are possibilities of acquiring an aircraft carrier. A contract has been signed with Russia for four Kilo-class diesel-electric submarines. The defence budget has, therefore, gone up. There are reports that China's published defence budget has doubled in the past five years (40% real growth). It is also keeping up its effort in the nuclear weapons field towards MIRVed solid fuel ICBMs/SLBMs and has accelerated tests for miniaturising war-heads in view of the impending CTBT in 1996.

Because of its size and arrogance (dominance), China casts a pall over the region. Apropos India, its friendship with Pakistan and moves towards Myanmar cause apprehensions. However, its leadership emphasises that international peace and stability are essential for its economic development. It has indeed improved its relations with India, the Republic of Korea, Vietnam, Singapore and Indonesia. Since 1971 its relations with the USA have been more or less normal. Both consider it in their national interest to achieve a relationship of cooperation. However, there are differences on Taiwan, human rights and on certain issues of trade and commerce. Since the break up of the Soviet Union and the end of the cold war, it can be said that China is without an external threat.

In matters of national security, all states structure their armed forces not only to ensure territorial integrity but also to protect and secure their perceived national interests. In case of Chinese, the reunification of Taiwan and the claim of sovereignty over maritime territory extending to the Spratlys in the South China Sea are two such objectives. This explains largely the development of China's modernised military power. The pragmatism of Deng's regime has opened up China to the world and it has become amenable to operating within the international system and rules out hegemonic wars.

Specifically, Sino-Indian relations show prospects of thawing further. India should persist in the present policy of expanding trade, of scientific and technical cooperation and cultural exchanges. The boundary question should be solved by negotiations in a spirit of compromise; give and take by both sides. Defensive plans for the northern border must necessarily include limited offensive operations in areas such as Demchok, Kaurik or the Chumbi Valley and the force structure reviewed and reduced somewhat from the present force level of ten mountain divisions.

THE NUCLEAR ASPECT

The concern of the USA vis-a-vis weapons of mass destruction (WMD) is limited to preventing proliferation. China is the only NWS that accepts the objective of total nuclear disarmament. Gorbachev's USSR did but Yeltsin's Russia has pulled out of even the no first use commitment. China has also, since long, made two other commitments. First, it will never use nuclear weapons against a non nuclear weapon state (NNWS). Second, it will not be the first to use nuclear weapons. So it is committed to 'No First Use'.

At a recent hearing of the Senate Government Affairs Permanent Sub Committee on Investigations, Gordon Ochler, Director CIAs non-proliferation Centre, said that US concern is limited to curbing the spread of WMD to the Third World countries and their acquisition by terrorist groups. The indefinite extension of the NPT in May this year has legitimised nuclear weapons in the hands of the five NWS. Article VI of the NPT contains an undertaking to "pursue negotiations in good faith on effective measures relating to the cessation of nuclear arms race at an early date and to nuclear disarmament". However, the NPT extension conference did not reach any agreement on the implementation of this article.

In their campaign to prevent proliferation to the Third World countries, the CIA has often sounded alarm that this sub-continent has been on the verge of a nuclear war. Testifying before the sub-committee on international security of the Foreign Affairs Committee on July 23, 1993, Jim Wolsey, Director CIA, stated that the sub-continent was on the verge of a nuclear war in 1990 (Robert

Gates). Both Gen V.N. Sharma and Gen Aslam Beg have denied this. Dr Pervez Hoodboy of the Qaid-e-Azam University, Islamabad, quoted Gen Baig as saying that the threat of massive Indian nuclear retaliation would be a constraining factor. There is thus a state of nuclear capability symmetry resulting in nuclear weapon stability on the sub continent.

Nuclear weapons are not weapons of war. Nuclear war fighting theories have been abandoned certainly since Ronald Reagan's pronouncement in 1985 that a nuclear war cannot be won and must never be fought. The only occasions when these bombs have been used was in August 1945 but never again. It would, therefore, not be rational to say that all future wars would be fought with a nuclear back drop and, therefore, India should develop an assured second strike capability. India is committed to universal nuclear disarmament. The PM has reaffirmed this stand in the last week of October 1995 at the UN. This principled stand needs to be persisted in even if the present US security strategy of dependance on nuclear deterrence makes its achievement unlikely in the foreseeable future. India should base its defence policy on conventional deterrence without giving up its option.

RELATIONS WITH THE USA

The foreign policy of the USA vis-a-vis South Asia has an important bearing on peace and security in the region. Although the USA talks about the evolution of a polycentric world with the USA, the European Union, Russia, China, Japan and possibly India and Brazil as centres of power, many in India believe that the US would rather see India weak so that it too can be goaded/directed like Pakistan. Witness, for instance the alleged sacking of both the President and the PM by Gen Abdul Waheed Kakkar, the COAS, on the bidding of the US Ambassador and the IMF in July 1993.

The second issue in this context is the US perception vis a vis Jammu and Kashmir. Would it like the creation of an independent state which it can control to better safeguard its interests in Central Asia? Home Minister S.B. Chavan has gone to the extent of stating in the Rajya Sabha on December 4, 1995 that the US harbours evil designs on Kashmir, calculated to gain a foothold in J & K. He said that the US tendency to observe that Kashmir's status was disputed only served to give a fillip to terrorist activities sponsored by Pakistan.

Super power status bestows certain privileges but it also implies great responsibilities. The manner in which the USA discharges these responsibilities may not win it approbation but stability in South Asia would appear to be an objective that would serve its interests best. Equally, an independent Kashmir would invite many takers from the neighbouring regions to fish in troubled waters. Be that as it may, there are certain issues that need to be clearly

grasped. First, India's future is essentially in its own hands. Economic development is the key to its emergence as a power centre. It alone can provide sufficient means for the social sector; education, health and population control. It alone can provide jobs and control unemployment. All these measures can further national integration.

Second, the USA is in a position to facilitate peace and stability on the sub-continent. It can dispel apprehensions of Indian hegemony. It can influence an end to the export of terrorism be it the Taliban in Afghanistan or the Mujaheddin in J and K. Testifying before the House International Relations sub committee on Asia and the Pacific on December 6, 1995, the assistant secretary of state for South Asia, Robin Raphel, said, "We have repeatedly urged Pakistan to end material support for Kashmir militants as a step towards lowering tensions." With steps now taken to improve relations with Pakistan such urgings need to be made effective/meaningful.

Another direction in which the USA can help is to ensure that arms aid or sales to the sub-continent are not resumed. Let Hank Brown be a one shot affair.

RESTRUCTURING

A realistic consideration of external threat to India's security indicates the continuation of the on going proxy war in J and K until the people of that state are persuaded to accept a political solution. Open hostilities between India and Pakistan are unlikely but must nevertheless be catered for. In the circumstances of symmetry in nuclear weapon capability on the sub-continent, force structuring should be restricted to conventional weapons deterrence.

Vis a vis the Sino-India border, steps taken to ensure peace and tranquility are bearing fruit. The boundary dispute is capable of being solved by negotiations in a spirit of give and take by both sides. Incremental measures in the way enlarging trade, scientific and technical cooperation and cultural exchanges will create the desirable environment for such negotiations. Defensive plans for the northern border must, however, include limited offensive operations. Force structure for operations in this mountainous region need to be reviewed and reduced somewhat.

Tabulation of forces, albeit in relation to Pakistan only, shows that India can initiate unilateral reduction in force levels. In the light of no more than three per cent of the GDP being made available for defence, and the rising cost of weapon systems, reduction becomes imperative; a smaller force with a higher fitness levels. Apart from reduction, there is an urgent need to restructure. The Army needs to streamline its organisations to reduce manpower and

increase mobility, particularly in the plains. The Air Force needs to work out the optimum number of combat squadrons and their mix. It may not be possible to sustain more than 30 odd squadrons and this number may be quite adequate to deter an external threat. There is no requirement to cater for the worst case scenario of a war on two fronts. The Navy's structure will depend on its role. First priority obviously goes to defensive tasks including the protection of off shore installations. Next comes the protection of the EEZ. In our present circumstances, naval forces for power projection are not within our means and, in view of some, not the requirement either.

The restructuring suggested above should be planned for implementation in the next 15 years or so. Reduction in force levels will permit induction of force multipliers rather than replacement of obsolete weapon systems to maintain the present numbers.

INTERNAL SECURITY (IS)

IS has traditionally been the Army's secondary role. Political liberalisation since independence has led to uprising in many parts of the country, particularly in areas which were unadministered and/or neglected. Naga Hills, Manipur, Lushai Hills (now Mizoram), Jharkhand and Bodo areas in Assam are examples where insurgencies erupted. There have also been insurgencies of another order like the one in Punjab during the 1980s and Kashmir since 1988/89.

Although the police and para military forces have multiplied, the Army has had to be deployed extensively in Nagaland, Manipur and Mizoram in the 1960s and 1970s and in Punjab and J and K in the 1980s and 1990s. Without absolving the Army of this responsibility, it is necessary to take steps that reduce this commitment. In any case, it would be wrong to justify large army manpower to deal with IS/insurgencies.

Reducing Army's employment for IS/insurgencies is certainly possible. This may not be the place to analyse this issue in detail. Suffice it to say that, apart from political anticipation to cut down the number of such eruptions, it is certainly possible to make the police and para military forces more effective.

In regard to restoring the police to its earlier standard when an SP considered it infra dig to ask for Army support to meet an IS situation, there are a number of reports gathering dust which make practical recommendations to improve the present state of affairs. Basically, the requirement is to cut out political interference in professional functioning, opportunity to train for IS and other duties and measures to inculcate a sense of pride in performance of duty in the manner prescribed. The rot that has set in is so pervasive that it will take some doing to make a perceivable impact. A beginning needs to be made immediately.

The multiplicity of para military forces requires either amalgamation or coordination by placing them all under one head. Ideally, the personnel of all para military forces should come from the armed forces. The army should revert to its earlier system of 7 years colour service and laterally move these soldiers to para military forces on the basis of affiliation of regiments to para military units. Such an arrangement would ensure regimental pride and traditions. The head of the para military forces should normally be an officer of the force given the status of an army commander under the COAS.

AGING PROFILE AND SHORTAGE OF OFFICERS

Restructuring the manpower intake is another aspect which needs urgent attention. The increase in the colour service of the Army from 7 to 17 years has been a retrograde step. It was a well intentioned welfare measure to entitle the man in uniform to a pension. However, it has adversely effected the youthful profile of the forces and has imposed a heavy pensionary burden. On an average, a soldier serves for 17 years and is on pension rolls for 30 years. If this system continues, a time will come, when there will be two pensioners for one serving soldier and the pension bill will equal the military salary bill.

The cutting edge of the Army are its combat units be it of the infantry, artillery, armoured corps or any other arm. The ideal age of a rifleman or a gunner or other is upto 25 years or 30 when he is physically tough, mentally robust and may not have acquired a family. A colour service of 5-7 years ensured that the men in sub units were of this age group. Colour service of 17 years has changed all this adversely. Nor does it provide a full career; the man goes on pension between the age of 35 to 37. Full career and a pension at the age of 55 can only be provided if the soldier/NCO can be laterally inducted after 5 to 15 years service into armed constabulary, para military services or other government services like posts and telegraphs, PWD and transport services for personnel from signals, engineers, the service corps and mechanical engineers. This is a workable proposal and was accepted in principle, by some ministers but has been resisted by the para military forces and some politicians in power.

A very sound and workable course which would overcome both the aging and the budgetary problems is proposed by Lt Gen ML Chibber in his book "National Service For Defence, Development and National Integration" published in 1995. He suggests a two track manning of defence services; 40 per cent careerists and 60 per cent short term national service (NS). The NS element would come from entrants to central and state police and para military forces. They would be required to do 5 to 9 years with the Army before they join the cadres for which they have been selected. Personnel selected for Coast Guard, ports and airport services would render national service with the Navy and the Air Force. With an average yearly intake of 6.3 lacs into government services, the 60 per cent NS intake can comfortably be met. He suggests

national legislation to implement NS which would cover all entrants to government services and students. (The latter, 10 lakhs a year, would be required to do only one year NS primarily in the field of education and environment).

NATIONAL SECURITY AND HIGHER CONTROL

On the issues of the evolution of national security policy as well as higher control of defence there is near unanimity among defence analysts. So much has been written on these issues that there is very little new to say. However, it must be stated clearly that India does not have a proper national security structure; National Security Council (NSC). To keep global as well as regional developments under review, to analyse them and propose courses of action in respect of issues that impinge on our interests, there is requirement of a multi-disciplined national security staff (NSS); a think tank. The NSS would work under the secretary of the NSC, a high powered secretary of rank not lower than the Cabinet Secretary, who would ensure that these analyses and proposals receive timely attention of the NSC. The NSC will, in effect, be a committee of the Cabinet chaired by the PM and with ministers of defence, external affairs, home, finance as permanent members. Other ministers and officials including the Chief of Defence Staff (When appointed. For the time being, the three chiefs) would be invited depending on the issues being discussed.

In as far as higher control of defence is concerned, an integrated ministry of defence (MOD), with the three service headquarters as part of it, is an absolute must. Serious rethinking is also called for in regard to the role of the MOD. More and more management of defence needs to be left to Service HQ with their integrated finance. The MOD should restrict its role to issues of national security, interaction with external affairs, coordination of various intelligence agencies, R and D, production and procurement of weapons.

Then there is the question of interservice coordination and operational efficiency. The present system of Chiefs of Staff Committee with the longest service chief as its chairman is not effective. There is a need to introduce the Chief of Defence Staff (CDS) system at the helm and theatre commanders for operational commands. The rationale for these organisational changes has been elaborated earlier and need not be repeated here.

NOTES

1. *Asian Strategic Review 1993/94*; "Trends in Defence Expenditure," Table 2.7 Pages 40/41.
2. *Ibid.* Figure 6. Page 37.
3. *Ibid.* Figure 5. Page 35.
4. 'The Rise of fundamentalism'. M.B. Naqvi's column in *The Times of India* of 22 Oct 1995.
5. 'International terrorism arrives in Pakistan'. M.B. Naqvi in *The Times of India* of 21 Nov 1995.

Integration of the Ministry of Defence with Service Headquarters

COLONEL KANWAL MAGO

BASIC PRINCIPLES

The responsibility for defence of a democratic country rests with the elected government and the responsibility for execution of this onerous task rests solely with the armed forces. It is, therefore, imperative that the political decisions and the overall strategy to achieve the national aims remain the prerogative of the elected government in power as they are solely responsible to the nation. For the conduct of this exercise there must, therefore, exist the requisite organisations. Some of the basic principles of the higher defence organisation in India as enunciated by Lord Ismay are as follows:-

- (a) Ensure control and direction of the higher defence organisation by the elected representatives of the people.
- (b) Coordinate smooth functioning of the three services with the government.
- (c) Adequate consideration to the view point of the services by the government.
- (d) Ensure higher committee meetings regularly to facilitate expeditious disposal of business reducing discussion on files to the minimum.

RELATIONSHIP BETWEEN POLITICAL AND MILITARY SPHERES.

Under Article 53 (2) of the Indian Constitution, the President has been vested with the Supreme Command of Nation's Armed forces. Although he is the 'dejure' head of the Defence Forces, 'de facto' control over these forces rests in the hands of the Prime Minister and the Cabinet, who are collectively responsible to Parliament for the defence of the country.

The defence mechanism has a political head at the top, viz, the Defence

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Minister, who is eventually responsible to the electorate, through the Council of Ministers and the Houses of Parliament and thus subordinates the military apparatus to the will of the people, as in any other democracy.

The political apparatus of the government formulates its political objectives and the grand strategy to achieve these. It then translates these into a defence policy, which it turns into practical achievements by providing the wherewithals, and getting the policy implemented by its executive agencies.

The military apparatus provides the expert advice to the political authority as also devises operational strategy and plans to counter security threats to the country, based on the defence policy and intelligence appraisals.

In practice, however, the political objectives, the military strategy and resources position mutually inter-act and final decisions emerge only after discussion between the political and military agencies.

The aim of governmental direction in peace, based on advice given by the military apparatus, is to continuously re-vitalize the nation's fighting potential and to keep it abreast of changing circumstances. The military apparatus determines the shape and size of the forces and evolves the operational strategy and contingency plans to fulfil it.

ORGANISATION FOR HIGHER DEFENCE

The organisation for higher defence control can be summarized as under:

- (a) *Tier 1.* (PM, Cabinet and Cabinet Committee on Political Affairs (CCPA)). Lays down the broad political and defence policy objectives.
- (b) *Tier 2.* (Defence Minister, COSC and other policy interpreting agencies, the Ministry of Defence). Interprets the aims and objectives and formulates the policy and plans.
- (c) *Tier 3.* (Army, Naval and Air Headquarters). Formulates plans for execution of the policy and plans laid down by Tiers 1 and 2 and is the main executive level.

Tiers 1 and 2 of this organisation generally function through committees. A military wing in Ministry of Defence provides secretariat and coordinates the functioning of various committees listed below:-

- (a) Defence committee of cabinet (since replaced by CCPA).

- (b) Defence Ministers Committee.
- (c) Chiefs of Staff Committee.
- (d) War Book Committee.
- (e) War Book Executive Committee.
- (f) Principal Personnel Officer's Committee.
- (g) Principal Supply Officer's Committee.
- (h) Defence Ministers Production and Supply Committee.
- (j) Joint Planning Committee.
- (k) Joint Training Committee.
- (l) Joint Sea Air Warfare Committee.
- (m) Joint Administrative Planning Committee.
- (n) Inter Service Equipment Policy Committee.
- (p) Principal Maintenance Officer's Committee.
- (q) Joint Communication Electronics Committee (JCEC).
- (r) Joint Electronics Warfare Board (JEWD).
- (s) Joint Electro Magnetic Compatibility Management Advisory Board (JEMCMAB).

Ministry of Defence as constituted at present, is partially a policy interpreting or formulating agency and partially an executive and coordinating agency. Details of the organisation and functions of the Ministry of Defence are given in the succeeding paras.

ORGANISATION OF MINISTRY OF DEFENCE

The Ministry of Defence consists of the Department of Defence, the Department of Defence Production, the Department of Defence Supplies and the Department of Defence Research and Development (DRDO). The three Service Headquarters are distinct and separate entities which function under the Department of Defence and are its executive Organs. In addition, certain inter-Service organisations function under the Ministry of Defence.

FUNCTIONS OF MINISTRY OF DEFENCE

The Ministry of Defence possibly finds its place in Tier 2 of the organisation for Higher Defence Control. It is the coordinating agency of the government of India for all matters pertaining to the defence of the country; it is ultimately responsible for obtaining and formulating policy decisions of the Central Government on defence matters, and transmitting them and processing their implementation by the Service Headquarters - to this extent it is a policy organ. It also exercises some executive functions in relation to defence production, supplies and inter-service organisations.

DEPARTMENT OF DEFENCE

Function. Major responsibilities of the Department of Defence relate to:-

- (a) Defence of India and every part thereof, including preparation for defence and all such acts as may be conducive in times of war to its prosecution and after its termination, to effective demobilisation.
- (b) The Armed Forces of the Union, namely Army, Navy and Air Force and their reserves.
- (c) The Territorial Army, Auxiliary Air Force and National Cadet Corps.
- (d) Works relating to Army, Navy, Air Force and ordnance factories.
- (e) Military Farms Organisation, Canteen Stores Department (India), military lands, cantonments and connected matters.
- (f) Civilians paid from Defence Services Estimates.
- (g) Ex-servicemen and pensioners.
- (h) Hydrographic survey and preparation of navigational charts.
- (j) Matters pertaining to Defence training.

ORGANISATION AND WORKING

The Department of Defence provides the secretariat organisation to the Defence Minister for dealing with all matters pertaining to the three services, inter-service organisations and civilian establishment under it. It also coordinates the actions of Departments of Defence Production, Supplies and DRDO, where necessary. The professional head of the

secretariat is the Defence Secretary (who has the status of a general and takes precedence after the service chiefs in the order of precedence). He is assisted by an additional secretary and a number of joint secretaries, deputy secretaries and under secretaries (equivalent to Lieutenant generals, Major generals, Colonels and Majors respectively in the warrant of precedence).

MINISTRY OF DEFENCE (FINANCE)

Background.

(a) As an outcome of Curzon-Kitchner controversy a new military finance department came into being in 1906, which was responsible to the finance member of Viceroy's Executive Council and was in no way subordinate to the war member cum commander-in-chief or the military establishment. This department was a direct forebearer of the present Ministry of Finance (Defence).

(b) Prior to May 1976, the defence division of the Ministry of Finance was an integral part of the latter and was headed by an additional secretary to the government of India who was designated as the Financial Adviser (Defence Services) i.e., FA(DS).

(c) The FA (DS) was assisted by a number of additional and deputy financial advisers of the status of joint and deputy secretaries respectively, the internal structure of the Ministry of Finance (Defence) to an extent paralleled that of the ministry of defence for the sake of functional convenience. However, in relation to the service headquarters, because of different internal structures, an official of finance (Defence) dealt with a number of sections or directorates on the subjects of his responsibility, rather than be responsible for all subjects dealt with by a particular section or directorate of service headquarters. FA (DS) also has under him the defence accounts.

Integrated Financial Adviser System. The integrated financial adviser system was introduced in the departments of defence production, defence supplies and research and development of the Defence Ministry in May 1976. It was decided to introduce the integrated financial adviser system in the department of defence also with effect from August 1, 1983. This has had a overbearing influence on our functioning and a detailed understanding of the subject is warranted to understand the importance of its integrated functioning with Service Headquarters. The system was introduced with the issue of following instructions:-

(a) The Defence Division of the Ministry of Finance (Department of Expenditure) headed by the Financial Adviser, Defence Services was transferred to the administrative control of the Ministry of Defence and forms the Finance Division of the Ministry of Defence. The various officers of the Finance Division viz. Addl. FAs, integrated Financial Advisers, etc will report to Financial Adviser, Defence Services. In view of the above, IFAs and their officers in the Department of Defence Production, Defence Supplies and R & D will hereafter be under the administrative control of Financial Adviser, Defence Services.

(b) The appointment of FA(DS) and Addl FAs/DFAs will be made jointly by the Ministry of Defence and Ministry of Finance.

(c) The Defence Accounts Department will continue to report to the Financial Adviser, Defence Services who will be the cadre controlling authority as before. There will be no change in the organisation set up vis-a-vis the services at field levels in so far as the Defence Accounts Department is concerned.

(d) In matters within the delegated powers of the Ministry of Defence, FA(DS) or his officers will be consulted before exercise of financial powers. In such cases, it will be open to the administrative secretary to over-rule the advice of the Financial Adviser Defence Services, by an order in writing, but it will also be open for the FA (DS) to request that the matter be placed before the Defence Minister.

(e) In all matters beyond the powers delegated to the ministry, FA(DS) and his officer will function as associate finance and will be responsible to and have the right of access to the Ministry of Finance, and to the Finance Minister through Secretary (Expenditure).

(f) If any important change in the duties and functions of the FA (DS) or the Defence Account Department is contemplated, approval of the Finance Ministry will be necessary.

(g) Keeping in view the special requirements of the Defence Ministry, the following procedure will be adopted in respect of schemes costing more than Rs. 2 crores:-

(i) Scheme costing more than Rs 2 crores but less than Rs 10 crores will be processed on file for obtaining the concurrence of Ministry of Finance.

(ii) Schemes costing over Rs 10 crores will be examined by the

Expenditure Finance Committee (EFC) presided over by the Secretary (E), with Defence Secretary, Secretary (EAD) as members and FA (DS) as Secretary. Secretary Defence Production and SA to Defence Minister would be invited when items concerning their departments come up for discussion. The recommendations of the above committee will be subject to formal approval of the Ministry concerned for CCPA etc. as per existing instructions.

(iii) Cases relating to revision of cost estimates in respect of items approved by EFC, where excess is over 20 per cent than the originally approved cost, will be referred to EFC as hitherto.

(h) On all matters arising in the Defence Ministry which, in the opinion of the FA (DS), will have repercussions on other ministries of the Government of India, consultations will continue to be held with concerned departments like establishment division of Ministry of Finance, Department of Personnel and Administrative Reforms etc.

(j) FA(DS) has the right of access to the Defence and Finance Ministers through Secretary (E) on such issues where he differs from the views of the administrative Ministry.

SERVICE HEADQUARTERS

Each service chief exercises his command and control through Principal Staff Officers (PSOs). Each PSO has a designated area of responsibility. Since we are generally familiar with various facets of the functioning of Service Headquarters, for the sake of brevity the same is not being attempted.

ANALYSIS OF NEED FOR INTEGRATING DEFENCE ORGANISATIONS AND CURRENT PROBLEM AREAS

In Indian democratic set up, President is the Supreme Commander of the Armed Forces, who exercises his command through the Cabinet. To represent the true will of the people, it is apparent that the civil Government must be Supreme.

Being the fourth largest Army in the world and with first rate fighting material in the form of our officers and men, adequacy of national resources and a strong national tradition of martial arts, there is no reason why we should not attain the position of fourth most powerful nation in the world. Failure to achieve this probably can be traced to the lack of integration in our defence set up which is so essential to provide synergy through proper coordination at

the political, professional, administrative and financial levels of our vast defence potential. The important problem areas resulting in such lack of integration are discussed in succeeding paragraphs.

PROBLEM AREAS : POLICY MAKING ECHELONS

Lack of clear policy directions as a result of constant consideration of national security aspects demands that political and military leadership are knitted together both for internal and external security. This is of paramount importance, because with muddled thinking and directions from the top in a vital area like national security, any amount of integration at lower echelons is not likely to bring the desired results. Defence Secretary who is responsible to the Cabinet in general and to the Defence Minister in particular, acts as a link between them and the three service chiefs. He is a non-professional tenure based bureaucrat. The whole team under him of civil servants though highly competent in their own field of administrative functions, lack a detailed knowledge about professional military matters which are highly specialised. Direct interaction and advice of the service chiefs to the highest policy making body (CCPA), therefore, is vital.

In the bureaucratic middle level, the Defence Planning Committee headed by the cabinet secretary is heavily dominated by civil servants vis a vis the three service chiefs. Since Service Headquarters and Ministry of Defence function independently, poor relationship and lack of understanding often affects the middle level decision process adversely. This can be corrected if the two function together at all levels as a matter of routine and have an in depth knowledge and experience about each others functioning.

At lowest policy making hierarchy, is the Chiefs of Staffs Committee. Due to large span of control (seven in case of COAS) of the service chiefs and due to multitude of other reasons, the chiefs are too preoccupied with their respective commands and have no time for joint command or interservice integration and co-operation, which are so vital for optimisation in current national scenario. This needs to be corrected on an urgent footing.

PROBLEM AREA : EXECUTIVE LEVELS

Multiplicity of Control. It is quite evident that there is a triplicity of Command in our defence functioning i.e., Ministerial, bureaucratic and financial. Ministerial and financial controls are essential in any democracy. However, gradual substitution of the bureaucratic control to replace the intended controls by the elected representatives of the people has been a basic ill in our system. The bureaucratic machinery together with the service headquarters

should ideally be designed to speedily achieve the objectives by translating the policies into quick executive action, rather than merely act as superiors. Civil servants no doubt have an important role to play but they should in no case become an impenetrable barrier to direct interaction on professional matters between the political executives and the Services. This, however, has been a pronounced trend which has been detrimental to the decision-making on many critical junctures (Sri Lanka, Siachen and Bangladesh). The Ministry of Finance (Defence) is yet another bureaucratic setup working independently, and exercising budgetary control as an "elite superior" and "know all" cadre over the defence services. The three entities, namely Ministry of Defence, Ministry of Finance (Defence) and Service Headquarters tend to look at the same issues in isolation of each other in a serial order, with a very strong "We and they" syndrome as against giving the matter an integrated systems look. Numerous Committees (Nawab Ali Yawar Jang Committee, Mishra Committee and Parliamentary Sub Committee in 1978) have brought out clearly that the duplication of work between the existing three tier defence set up, with service headquarters at the bottom, is not only wasteful in terms of finance, talent and time but also militates against speed, efficiency and morale.

Lack of Mutual Knowledge and Understanding. The civil servants come for short spells to the centre or are being moved from one ministry to another. They therefore do not acquire the required experience and expertise. In the words of the first Defence Secretary of the country "The ignorance of the Civil Servants in India about the Military matters is so complete that we may accept it as a self evident and incontrovertible fact". There is no change in the situation till date and the civil servants, unfamiliar with the military issues sit in judgement, even on purely military matters. This is likely to prove costly at critical moments. The same is true for the financial advisers. On the other hand, the knowledge of defence officers, who also serve in the Service Headquarters on tenure basis is equally lacking. They are ignorant about the functioning of the Ministries of Defence and Finance. They also lack the wider national perspectives and are invariably not well versed with the financial management policies and procedures practiced at macro level of the national economy.

Lack of Dynamism in Organisational Development. Despite fighting four wars, we have not been quick enough to put the lessons learnt in the past to effective use and have failed in updating our organisations and institutional processes to foster cooperation through required degree of integration between the services as also between the Defence and Civil Services. The reasons for such a state of affairs, in addition to some of those described in preceeding paragraphs, can be listed below :-

- (a) Non-existence of a permanent coordinating body for the three services resulting in independent evolvement of the services as separate entities with dissimilar establishments.
- (b) The vesting of excessive powers in Ministry of Defence, without depth of knowledge and experience and accountability.
- (c) Lack of political will, aim and direction for an integrated long term strategic policy thereby leading to non-existence of mechanisms for coordinating military instruments of national policy with other Government agencies responsible for National Security policies.
- (d) Dominance of military in politics of the neighbouring countries making politicians cautious of the dangers of militarism, coupled with dominance of Indian Army among other services due to predominant land threat in the Indian context.
- (e) Deliberate isolation of Defence Services from the rest of country resulting in their remaining unintegrated into the system and the decision making process.
- (f) Blanket ceilings on budgets resulting in a tendency to "situate the appreciations".

In Service Factors. The following factors further affected the interservice cooperation and integration of services with the Civilian Control:-

- (a) Lack of systematic training to the defence personnel to appreciate and understand the working of various agencies of civil government.
- (b) Thrust for modernisation depriving the services of desired current capability. Programming and budgeting has been attracting greater attention vis a vis the operations.
- (c) Excessive inter service rivalry resulting in projection of compromise solutions. The desire to put up "united front" to the Secretary of Defence/Civilian Control has further weakened the Chairman of Joint Chiefs of Staff Committee thereby making Civilian Control over military stronger. This also resulted in poor advice on joint matters as Service Chiefs tend to be advocates of their own service rather than effectively contribute to joint missions.
- (d) Proliferation of staff layers and duplication and overlapping of functions.
- (e) Lack of clarity in strategic goals.

- (f) Tendency to accept status quo due to insufficient mechanism for change and total subjugation of the services.
- (g) Mounting sense of helplessness and disenchantment in the Defence forces, particularly so in the officer cadre.
- (h) Excessive span of work of service Chiefs, and lack of well defined clear cut areas of work responsibilities to the PSOs resulting in duplication/dual responsibilities in certain areas.

RECOMMENDATIONS FOR IMPROVING INTEGRATION BETWEEN MINISTRY OF DEFENCE & SERVICE HEADQUARTERS

HIGHER DEFENCE SET UP

Policies enunciated at the top policy making echelons have a direct bearing on the integrated functioning at executive levels. Towards this aim, the following factors are recommended to be kept in view while bringing changes in our higher Defence Organisations:-

- (a) The Ministry of Defence should continue to be controlled by the Cabinet.
- (b) There should be a direct two way traffic between the Defence Minister/higher policy making bodies and the Service Headquarters.
- (c) An effective decision making body under the chairmanship of Defence Ministry having service representatives should be created. This will ensure an on-going systems look on various issues resulting in an integrated approach to decision making.
- (d) Financial Advisor should be fully subordinated to Defence Ministry and directly responsible to him for the sanctioned budget.

MINISTRY OF DEFENCE

- (a) Authority and responsibility structure of civil servants needs to be defined clearly. The authority to be solely entrusted to them should be limited to the areas of their expertise or the areas where clear cut accountability could be defined.
- (b) Areas requiring specialised professional military knowledge should be delegated to the services through a Joint Service Coordinator, who would be directly responsible to the political authority. The bureaucratic

set up should be fully integrated with the Service Headquarters and the Defence Secretary heading the same should be on par with Service Chiefs, all of whom should continue to have a direct access to the Defence Minister as also to other appropriate policy making bodies at the national level. This will ensure that the Joint Coordinator, under whom they would function, does not assume a overbearing authority threatening the political authority. Additional curbs, in the form of the joint coordinator not having any executive control over the respective services, barring him to report annually on the Service Chiefs, non-participation in selection process of his successor, etc, could be thought of to increase the assurance to the political leadership.

(c) Besides integration of Ministry of Defence and Finance with the Service Headquarters at the macro level, these should be staffed by percentage of service officers along with the civil servants. This will provide the necessary service view point and help in rational decision making. This will also reduce the bureaucratic delays and saving of valuable time, resources and talent as also reduce the "we and they" syndrome.

(d) Civil servants should have longer tenure in Ministry of Defence and should be at least called back for repeat tenures, if they cannot be employed on a permanent basis with the Ministry of Defence.

(e) Civil servants (both administrative and financial experts) should be increasingly detailed on relevant service courses to increase their awareness of the service conditions and requirements.

(f) Suitable evaluation body and matching systems for its integration with Service Headquarters should be created to ensure that lessons learnt in the past are put to effective use in revamping the organisations and procedures on a continuing basis.

SERVICE HEADQUARTERS

(a) A joint coordinator of the three services should be created to ensure inter service cooperation and integrated decision making as against compromise solutions due to conflicting interests of each service.

(b) By reducing the span of control of Service Chiefs to manageable levels, the limited number of PSOs will be able to devote more time and pay more attention to policy matters and their executions in the respective areas of responsibilities in conjunction with their civilian counterparts, as compared to the time the Service Chiefs are able to devote in

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the existing organisation. This will also reduce many overlapping functions existing in the present set up.

(c) Systematically planned inputs during courses to service officers regarding administrative and financial systems at macro level and functioning of the civil government should be introduced. Careful and impartial selection of officers for appointments in Service Headquarters with longer and frequent tenures with full career protection can also go a long way in improving the interaction. The existing policy of mandatory gap of six years for a posting to Delhi up to the rank of Colonel should be reviewed.

(d) By boosting the sagging morale of the armed forces, particularly the officer cadre, by improving their image and social status in society at least on par with the civil servants.

Any organisations proposed for Higher Defence management which include the points identified above will meet the requirement of enhancing the integration between Defence Services and Ministry of Defence. Drawing of specific organisations for various levels is not being attempted, as a number of equally effective solutions are probably feasible. A lot of debate on the subject has been going on for many years and a combination of any pragmatic measures based on the suggested lines are expected to bring in the desired results.

CONCLUSION

The legacies of Higher Defence systems handed over to us by the British have been further compounded adversely over the years. The resultant weaknesses in the higher defence organisation in India manifest themselves in the form of existing supremacy and excessive control by bureaucracy over the services, isolation of Service Headquarters from decision making, total alienation of services from bureaucracy resulting in awkward relations and poor integration between the relevant ministries and the services.

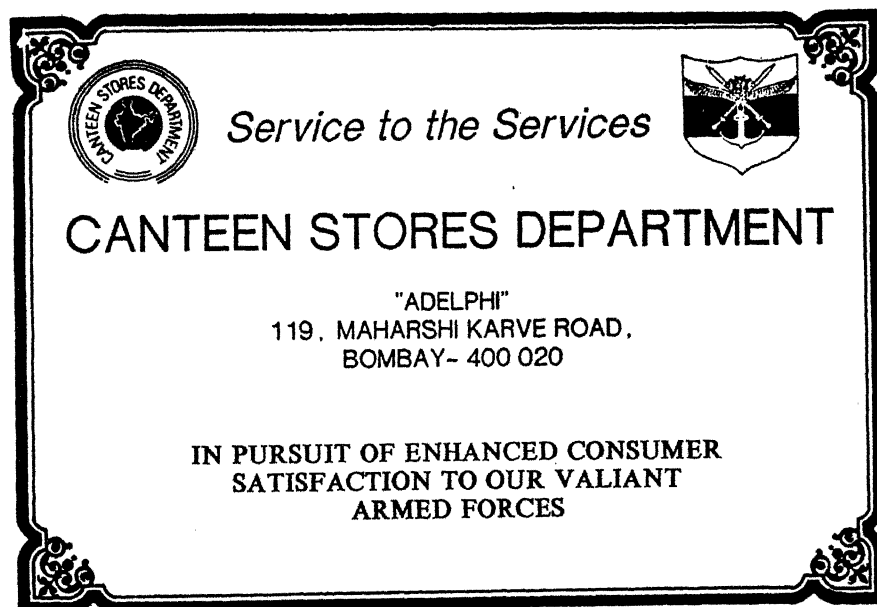
The services themselves suffer from a sense of helplessness and disenchantment with the system. They also display an apparent lack of integrated functioning between themselves. The major problem areas are poor coordination at the top, large spans of control by Service Chiefs, lack of clear directions on futuristic planning on a common national platform and marked absence of effective financial planning machinery.

Lack of mutual knowledge of the functioning and non-appreciation of the

requirements of each other by both services and civil servants is a primary drawback, which hampers integrated functioning and rational decision making.

BIBLIOGRAPHY

1. Lt Gen SK Sinha; "Higher Defence Organisation" (Part-I) : *USI Journal* Jan - Mar 1991.
2. Lt Gen SK Sinha; "Higher Defence Organisation" (Part-II): *USI Journal* Apr - Jun 1991.
3. Brig NB Grant (Retd) AVSM; "National Security, Unifield Defence Command": *USI Journal* Apr - Jun 1991.
4. Air Marshal ML Sethi, PVSM, AVSM (Retd); "Higher Defence Organisation in India": *USI Journal* Jan - Mar 1990.
5. Brig RK Gupta; *A look at the Defence Organisation Structure.*
6. *Notes for staff officers posted to Army Headquarters.*
7. *Institute for Defence Studies and Analysis Journal* Jul 1968; Article on National Defence Policy and Higher Direction of War.
8. K Subramanyam; *Perspectives in Defence Planning* 1972.
9. AL Venkateshwaran; *Defence Organisation of India*, Delhi 1957.
10. Lt Gen SK Sinha; *Higher Defence Organisation in India* (USI Monograph) 1980.
11. Nagendra Singh; *The Defence Mechanism of the Modern State.*



Nuclear Weapons : A Threat to Human Security or a Sacred Trust? - Part II

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Addressing the American people after the Nagasaki bombing on August 9, 1945, President Truman declared: "The atom bomb is too dangerous to be loose in a lawless world... We must constitute ourselves trustees of this force-to prevent its misuse, and to turn it into channels of service to mankind. It is an awful responsibility which has come to us. We thank God that it has come to us instead of our enemies and we pray that He may guide us to use it in His way and for His purposes".³⁰ He further expanded his idea of trusteeship in his address in New York on October 27, 1945 when he explained: "The possession in our hands of this new power of destruction we regard as a sacred trust. Because of our love of peace, the thoughtful people of the world know that trust will not be violated, that it will be faithfully executed".³¹ Expanding on Truman's concept, Secretary of the Navy James Forrestal proposed that just as some powers will have trusteeship rights over certain territories, the United States should be empowered to a trusteeship over nuclear weapons on behalf of the United Nations.³² From Truman to Clinton, this is how American possession of nuclear weapons has been presented to the public. Even during the Manhattan Project a nonproliferation policy was consciously pursued; certain crucial areas of nuclear research and development were deliberately sealed off from the British and French scientists participating in the project. Niels Bohr's plea to inform the Soviet leadership of the existence of the project without revealing its technical secrets was summarily rejected in pursuit of this policy. Capture of German nuclear scientists and destruction of their laboratory facilities during the last stages of the Second World War, and cornering of uranium ore from different parts of the world were designed to stop any other country from embarking upon a nuclear weapons programme. The U.S. Atomic Energy Act of 1946 which provided for most severe penalties in case of violation of nuclear secrecy amounted to the abrogation of commitments to continue Anglo-American nuclear collaboration after the war.

With the inauguration of the Atoms for Peace plan announced by President Eisenhower before the UN General Assembly in December 1953, the United States embarked on an era of comparative openness in the nuclear field.³³ Agreements for cooperation in peaceful uses of atomic energy, includ-

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ing gifts of small research reactors, release of non-sensitive technical information, training of young foreign scientists in the United States and provision of economic assistance were part of this new programme. Civilian nuclear industries began to develop in the United States, the Soviet Union, Britain and Canada. The United States initiated a policy of inserting inspection rights (later called safeguards) in its agreements with foreign countries in exchange for cooperative nuclear undertakings. This was a novel feature of nuclear cooperation, especially in view of the fact that intrusive foreign inspection was imposed in the crucial energy sector. The recipient countries had no option but to agree to these servitudes of civilian nuclear technology. These became the inevitable features of nuclear cooperation between countries. The International Atomic Energy Agency (IAEA) was established with the mandate to promote peaceful uses of atomic energy, especially in the developing countries. It was initially also expected to be the repository of fissile material from dismantled nuclear weapons, which could then be used in nuclear reactors, thereby promoting nuclear disarmament and simultaneously encouraging peaceful uses of atomic energy. The Agency also developed safeguards to be applied on nuclear equipment and materials. Gradually the United States, the Soviet Union, Canada, Britain and France adopted the policy of transferring their inspection rights to the Agency. It became the nodal agency for the implementation of nuclear safeguards. During the last few decades this Atomic Robinhood has been turned into a mere Atomic Policeman.³⁴

An elaborate system of bilateral, regional and international controls was established to stem the flow of nuclear knowledge and technology. The Non-Proliferation Treaty which came into force in 1970 is the 'the crown jewel' of arms control. The fundamental objective of the treaty was to consolidate the East-West power structure which was under considerable strain due to proposals for the creation of a multilateral nuclear force in Western Europe. It rested on the geopolitical authority of the two superpowers which were not only the leaders of the rival alliance systems but were also the most advanced in military as well as civilian uses of nuclear technology. The treaty was negotiated in the period of transition from pre-industrial to industrial atomic ages. It was a period of nuclear euphoria. Atoms for Peace — yes, there was a time when countries could have legitimate peaceful nuclear aspirations without being suspected of harbouring secret military ambitions — were expected to promote rapid industrial development especially of countries which had few domestic energy resources of their own.

A large number of states, many of whom had just emerged from colonial rule, were beguiled into trading a considerable chunk of their sovereignty — the right of self-defence and autonomy in the energy sector - in return for promises by nuclear weapon powers to start negotiations leading to nuclear

disarmament and to promote peaceful uses of atomic energy. While renouncing their right to acquire the most powerful weapons, the non-nuclear weapon states gave the sanction of international law to the factual dominance of the nuclear weapon powers. This is one of the most extraordinary features of the nuclear age. These signatories did not fully comprehend the logic of nuclear inequality. Those states which assumed the role of nuclear Galahad would, of course require a thicker armour to look after the lesser breed.³⁵ The bulging armouries of the nuclear weapon states are supposed to maintain peace and stability in the world; but the conjectural weapons, even a few of them, produced by additional states are weapons of mass destruction (WMD) which are destabilising and most threatening to world peace.

The initial targets of the Non-Proliferation Treaty were West Germany and Japan. In West Germany, the treaty was dubbed as a "Nuclear Versailles" and a "Second Yalta".³⁶ There was a hard core of resistance to the treaty in the Bundestaag of which 90 deputies voted against its ratification. Manfred Woerner, who later became Secretary General of NATO, was one of them. Fear of industrial espionage was a contentious issue. While the two superpowers had proposed a treaty of unlimited duration, Germany and Italy favoured a duration of 25 years to be followed by a conference to decide its future. It was suggested that an American commitment on uninterrupted supply of enriched nuclear fuel for German reactors should be made a precondition for German accession to the treaty. The United States accepted the West German condition that the dissolution of NATO would lead to German withdrawal from the treaty. The provision in the treaty allowing non-explosive military research was inserted due to Italian lobbying for it.³⁷

Japan was one of the last countries to accede to the treaty; its accession came in February 1970 and the treaty entered into force on March 5, 1970. The West German signature in November 1969 facilitated the Japanese decision. It has been a deliberate Japanese policy to ensure parity with the West Europeans. Japan, like West Germany, was dependent on the United States for the supply of enriched nuclear fuel for its power plants. The Japanese government issued a long list of reservations at the time of accession. These were about the long duration of the treaty as well as the possible adverse impact of IAEA safeguards on its energy economy. It, however, pointedly took note of the withdrawal clause in the treaty. The Japanese government signed a safeguards agreement with the IAEA six years after its accession to the treaty.³⁸

While reluctantly accepting inequality in the military sphere, the industrialised countries refused to tolerate inequality in the civilian domain. The NPT safeguards, designed with major technical contributions from West Germany and Japan, provided for minimum human intervention in order to

avoid possibilities of industrial espionage. The objective of these safeguards was to detect diversion of 'significant quantities' of nuclear material from peaceful to military purposes and its deterrence through early detection. A significant quantity of nuclear material was defined as 8 kilograms of plutonium and 25 kilograms of HEU, each of these amounts enough to manufacture at least one nuclear device. Safeguards applied to the nuclear material as well as to the facilities through which it passed. They were essentially a nuclear material-counting device; they divided the fuel cycle of the inspected state into Material Balanced Areas (MBA) at which point inspection became imperative. There was also a provision for Material Unaccounted For (MUF); in a sophisticated fuel cycle the amount of MUF would obviously be considerable.³⁹ Ryukichi Imai, one of the architects of NPT safeguards, has pointed out: "Put cynically, the amount of material unaccounted for could total 10 to 15 bombs every six months", depending upon the number of MBAs.⁴⁰ The NPT safeguards were not designed for a clandestine nuclear programme; every safeguards agreement with the IAEA has to give an inventory of the fissile material as well as the facilities in which it is contained so that safeguards can be imposed. Iraq used this loophole when it started a covert weapons programme while its nuclear facilities were being regularly inspected by the Agency.

The industrial foundations of the NPT regime were shaken soon after the accession of the target countries. The 1970s witnessed a great drama in the form of efforts by West European countries to produce their own enrichment facilities and to enrich themselves through nuclear commerce. American monopoly on supplies of enriched uranium — a lucrative by-product of a massive nuclear weapons programme — was broken. Aggressive nuclear export policies of West Germany and France posed a commercial challenge to the United States.⁴¹ The multi-billion dollar deal in 1975 between West Germany and Brazil providing for a complete nuclear fuel cycle caused an uproar in the United States. Influential circles in the U.S. Congress accused West Germany of nuclear irresponsibility and proposed a market-sharing arrangement in the civilian nuclear arena.⁴² The rise in the price of oil in 1973 led to highly exaggerated projections of growth in global nuclear power industry and the industrialised countries were determined to carve out their shares in the coming bonanza. The United States and its military allies were now locked in intense commercial competition.

The American Congressional response to this challenge was in the form of the Nuclear Non-Proliferation Act of 1978. All commercial agreements with the United States for supply of nuclear equipment or material had to be renegotiated. This introduced an element of uncertainty in the energy planning of the recipient countries. The Act extended U.S. jurisdiction to spent nuclear fuel, regardless of origin, utilised in any reactor or facility supplied, partially

or completely, by the United States. Thus, if Namibian uranium was used in a Japanese reactor supplied by the United States, American rights over the spent fuel were to be as sweeping as in the case of U.S. supplied uranium. Since the majority of spent fuel in storage ponds outside the socialist bloc was of U.S. origin, the Act had an impact on global nuclear commerce and civilian nuclear industries.⁴³ India was also adversely affected by the Act; fuel supplies to the Tarapur Station were periodically subjected to Congressional obstructions. In fact, the legislative history of the Act shows that it was drafted with India as the main target.⁴⁴

The NPT had not prohibited the development of enrichment and reprocessing facilities so long as they were under safeguards. Reprocessing was generally considered a necessary component of an efficient fuel cycle, an essential step in nuclear waste disposal and a logical move toward the projected development of a 'plutonium economy' through the development of breeder reactors. Noble laureate Glenn T. Seaborg, the former Chairman of the U.S. Atomic Energy Commission, had been a great promoter of plutonium economy. According to the new American policy, not only nuclear weapons but even reprocessing and enrichment facilities became a forbidden fruit. This departure from previous policies was attacked even by spokesman of the American civilian nuclear industry. It was also in violation of Article IV of the NPT which guaranteed the "inalienable right" of non-nuclear weapon states to unimpeded access to nuclear technology and materials. The definition of proliferation changed from acquiring nuclear weapons or other explosive devices to developing nuclear explosive capability. Consequently, the objective of safeguards changed from early detection of diversion of significant quantities of nuclear material from peaceful to military pursuits to prevention of development of nuclear explosive capability.⁴⁵ This unilateral attempt to change the rules of the nuclear game by its own architect could not be tolerated and there was an uproar in Western Europe and Japan. America's military allies/commercial competitors simply refused to accept this new definition of nonproliferation. They were furious about American efforts to coerce them on reprocessing where they viewed that they had an advantage over the United States.⁴⁶

Faced with this opposition, the United States convened an International Fuel Cycle Evaluation. Meeting between November 1978 and February 1980, 590 nuclear experts from 46 countries held 61 meetings for this purpose. Conceived as a technical exercise and not a diplomatic negotiation, it brought together industrialised and developing countries to explore proliferation-resistant technologies. The fact that the United States felt compelled to convene such an exploration testifies to her inability to impose unilaterally conceived restrictions on the flow of nuclear technology. The gathering produced 20,000 pages of documents but it was a technically disappointing exercise. There were

no technical fixes and the industrialised countries were determined to pursue their own trajectory of civilian nuclear development. After three years of bitter controversy a nuclear truce was declared. The industrialised countries were allowed to have complete nuclear fuel cycles necessary for their energy autonomy.⁴⁷ The new thinking was in favour of drawing a line not between safe and dangerous technologies but between 'safe' countries (irrespective of whether they had nuclear weapons or not) which could have these technologies and other countries which were considered dangerous and therefore should be satisfied with fragmented and incomplete nuclear industries.⁴⁸ This attitude has become the cornerstone of the nonproliferation regime. Nowadays, the term invoked is 'rogue' states. There has also been a gallery of 'rogue' leaders from "the proverbial nuclear-armed Lumumba who would bomb people rather than eat them" to Saddam Hussein.⁴⁹

The concerns of the industrialised countries were taken care of in two stages. During the drafting stage of the NPT, major concessions were made to their security concerns, and fears of industrial sabotage allayed through a safeguards system designed and approved by them. Their scientific and technological competence facilitated their transition to the status of autonomous civilian nuclear powers which enabled them to move towards acquiring a nuclear capability as much as possible without breaking the rules. When the United States attempted to change multilateral accords unilaterally, they succeeded in making their nuclear enterprises immune to the rigours of the U.S. Non-Proliferation Act. Their close security ties with the United States and reliance on nuclear deterrence facilitated this transition. They became part of a collective nuclear hegemony under the leadership of the United States. What about the developing countries?

They were subjected to increasing pressure to open up their nuclear industries to external controls. A 'Trigger List' of sensitive technology items was published by the IAEA in 1974. A nuclear suppliers' cartel was formed to regulate the flow of nuclear technology and to manage commercial competition. Between 1974 and 1977 the so-called London Suppliers Group drafted Guidelines for nuclear commerce; these were published by the IAEA in 1978. France, which had not yet joined the NPT was roped into this group. "Probably because we had not quite overcome the bad memories of having been pushed to the wall by the United States", observed a French nuclear expert, "we were reluctant to join the club of those who push the others to the wall".⁵⁰ France was happy to become a member of this privileged club.

The Security Council passed Resolution 687 after revelations regarding Iraq's secret nuclear weapons programme. The UN Special Commission (UNSC) headed by Rolf Ekeus has been charged with the task of dismantling Iraq's

nuclear, chemical, biological and ballistic missile systems and capabilities. This has involved forcing Iraq to allow inspection of the covert facilities, confiscation of thousands of documents and materials and the destruction of all these facilities. This is the most comprehensive task of disarmament of a country being handled by the Security Council. A resurgence of restrictive approaches following the Gulf War has led to further tightening of the non-proliferation regime. The Board of Governors of the IAEA decided in 1992 to assert the right of challenge inspections of any nuclear facilities at any time in a country under Agency safeguards. An enlarged group of suppliers met at Warsaw in 1992. It adopted 40 documents. The new Guidelines say that the objective of nonproliferation is the prevention of transfer of goods which could further "nuclear explosive activities" or "nuclear fuel cycle activities which are not subject to safeguards". Moreover, international cooperation in the civilian nuclear enterprise is made dependent on promotion of this newly defined nonproliferation policy. Dual use items of technology are made subject to tight licensing procedures. This almost suggests abrogation of Article IV of the NPT. A Missile Technology Control Regime (MTCR) has also been established.⁵¹ As global diffusion of technology gathers momentum, there will be an ever-expanding web of technology controls.

Apart from the accession of France and China to the NPT after years of hesitation and criticism, two major developments had a great impact on the nonproliferation regime — the South African announcement regarding its secret nuclear weapons programme and the notice given by North Korea of its intention to withdraw from the NPT. South Africa acceded to the NPT on July 10, 1991 and the first team of IAEA inspectors arrived in November 1991. It was reported that about 70 nuclear sites were inspected and there was no report about any developments which could question South Africa's non-nuclear weapons status. Then on March 22, 1993 President de Klerk declared that South Africa had a secret nuclear weapons programme for several years and had produced six nuclear weapons but soon after his becoming President he had decided to dismantle them. This decision was obviously related to the impending black rule in South Africa. It is now revealed that the South African government kept its military secret while joining the NPT because of the fear that the Security Council may impose sanctions as it had done in the case of Iraq.⁵² But the fact remains that when South Africa acceded to the NPT as a non-nuclear weapon state, it had six nuclear weapons in its possession and all the facilities necessary for a full-fledged weapons programme.

Dismantling the South African nuclear weapons was kept a top secret. By September 1991, nuclear material had been removed from the weapons, melted down and stored. Major non-nuclear components of the weapons, design drawings and photographs still remained. Their destruction began in 1992.

By the time of de Klerk's announcement sensitive weapons components were destroyed or damaged and most of the classified documents shredded. It is reported that about 400 kilograms of HEU were removed from the dismantled weapons. The South African government declined to sell this material to the United States and is now planning to use it in its Safari research reactor. Only less than 25 kilograms of this material can be consumed in this reactor annually. Thus South Africa will continue to have a sizeable amount of bomb-grade material for more than a decade. There was a bizarre episode when 16 former members of the weapons programme threatened to reveal secret information to the highest bidder unless they were given more than a million dollars in unemployment benefits. The South African government had to obtain a court injunction prohibiting them from disclosing such sensitive information.⁵³ Can a country which had produced nuclear weapons be put on par with other parties to the NPT which are innocent in these matters? South Africa has become the first non-aligned country to be made a member of the Nuclear Suppliers Group and is also reported to have joined the MTCR.

North Korea's announcement on March 12, 1993 of intention to withdraw from the treaty was an unprecedented event. It was the first case of a state invoking the withdrawal clause requiring an advance notice of three months. Intense military and economic pressure was exerted and the crisis was aggravated by the joint U.S. -South Korean military exercise code-named Team Spirit. The matter was not referred to the Security Council because China publicly opposed such a move and declared its opposition to any sanctions to be applied to North Korea. As Pyongyang's bulk of trade is with China, trade sanctions without Chinese support would have been meaningless. An Agreed Framework between the United States and North Korea has now been hammered out. A Korean Peninsula Energy Development Organisation (KEDO) is to implement the agreement. The United States, Japan, South Korea, Australia, Canada and New Zealand are members of this consortium. North Korea would receive the equivalent of about \$ 4 billion in the form of two 'safe' light-water reactors and a supply of oil for heating and electricity generation over a period of ten years. North Korea's old graphite reactors, the cause of concern will be dismantled and replaced by the two safe reactors. This process is expected to be completed in ten years. Japan and South Korea will pay more than 80 percent of the cost while the American share is to be between \$ 22 m and \$ 30 m a year over a period of ten years. Australia has pledged \$ 5 m and New Zealand \$ 350,000. An American nuclear analyst has rightly said that the United States decided to buy North Korea's nuclear weapons programme.⁵⁴

Two recent initiatives of the Clinton administration reflect a shift away from the old East-West framework and towards regional conflicts. The De-

fence Department's Bottom-up Review of September 1993 provided for a force structure enabling the United States "to fight and win two nearly simultaneous major regional conflicts (MRCs)"; in addition, it should allow participation in UN peace enforcement operations. Thus the force structure is designed for two-and-a-half wars, of which two would be of the magnitude of the Gulf War.⁵⁵ The Defence Counterproliferation Initiative announced on December 7, 1993 is based on the assumption that the policy of prevention of proliferation through denial of technology is no longer sufficient; the task of protection should be added to the task of prevention.⁵⁶

There appears to be some conflict between the perspectives of the State Department and of the defence establishment. While the State Department appears to favour diplomatic and economic pressures to stem the tide of proliferation, the Defence Department is going ahead with development of military planning for this purpose. The objective of counterproliferation is to increase the number of opportunities for intervention. Enhanced intelligence and reconnaissance, improved methods of detecting nuclear, biological and chemical capabilities and protective gear to allow military operations in environments where these weapons might be used are designed to ensure militarily successful interventions to prevent nuclear proliferation. It is reported that \$1b are set aside for this purpose. Gerald Yonas, director of research at Sandia National Laboratories, says that the objective is "to make proliferation a steep slope: hard to climb up, easy to back down".⁵⁷ Information supremacy, substantially aided by 'HUMINT (human intelligence)', will facilitate effective intervention to scuttle nuclear weapon programmes. NATO, in its June 1994 Policy Framework on Proliferation of Weapons of Mass Destruction, placed proliferation risks high on its agenda.⁵⁸ The Russians are also focusing on regional conflicts in the context of their "near abroad". They have announced a Russian version of Counterproliferation. Defence Minister General Pavel Grachev declared in June 1994 that the countries of the unpublicised 'nuclear club' formed "a fairly dense half-circle, embracing from the south the geostrategic space occupied by Russia and its closest neighbours, creating a vague zone of 'nuclear risk'".⁵⁹ Some weapon scientists in the American laboratories are advocating development of 'micronukes', 'mininukes' and 'tinynukes' which can be effectively used without causing great 'collateral damage'.⁶⁰ It was announced in late 1992 that Russia had already developed a mininuke which, according to Academician Yuli Khariton, has "many subtleties and much elegance".⁶¹

The five nuclear weapon powers have exploded 2,038 nuclear devices so far. If one takes into account the American definition of a nuclear test — either a single explosion or more than one explosion conducted within 0.1 second of each other within a circular area of two kilometers in diameter — then the total

number of tests would increase considerably. These countries have polluted the global atmosphere with 511 nuclear explosions. The total yield of these explosions was approximately 629 megatons, the equivalent of about 42,000 bombs of the explosive power of the weapon dropped on Hiroshima.⁶² They have polluted the oceans, blasted 6 whole islands into radioactive fallout, poisoned marine life and spread incurable diseases among the hapless people in the neighbourhood of their explosions. They have sent their civilian and military personnel into ground zeros soon after nuclear explosions and have conducted experiments on their own people by injecting quantities of plutonium into the bodies of mentally retarded children and inmates of prisons. The details of these inhuman experiments are only now being revealed.⁶³ The scorecard on testing, counting from the date of each country's first test, is: for the United States, one explosion every 18 days; for the Soviet Union, one every 21 days; for Britain one every 331 days; for France, one every 61 days; and, for China one every 264 days.⁶⁴ France, Russia and the United States have been observing unilaterally declared nuclear test moratoria since 1992. Since British tests are conducted in the Nevada test site, American moratorium automatically applies to Britain as well. China is improving its scorecard by being the only country to have continued testing in 1993, 1994 and 1995.⁶⁵

Negotiations for a CTBT were resumed in the Conference on Disarmament at Geneva in January 1994. The real impetus for this step was to avoid criticism at the impending NPT Review and Extension Conference regarding the lack of progress in concluding such a treaty. A text with many reservations contained in brackets has been produced. Russia and the United States, with their extensive experience in testing and considerably large nuclear stockpiles, have an edge over Britain, France and China; they are in different research and development cycles which they want to complete as soon as possible. The British made progress on CTBT conditional on indefinite extension of the NPT. The United States, supported by Russia, wanted 'preparations' for tests as well as hydronuclear testing excluded from the proposed treaty. China has suddenly developed an interest in peaceful nuclear explosions. The Chinese have also asked a fundamental question — what exactly is a nuclear explosion? This issue was raised by Sweden during the negotiations for the NPT. It was, however, found to be an extremely difficult nut to crack; the proposed definitions were either too narrow or too broad. The negotiators, therefore, threw up their arms in despair.⁶⁶ But it is an extraordinary fact that the NPT does not contain a precise definition of a nuclear explosion.

A ban on the production of fissile material for military purposes has been occasionally discussed since almost the beginning of the nuclear age. It was proposed as a disarmament measure in the late 1950s but was ignored because of the intensification of the nuclear arms race. At the peak of American

production, about 80 metric tons of HEU and 6 metric tons of plutonium were being produced every year.⁶⁷ Russia as well as the United States have enormous stockpiles of fissile material at their disposal; in fact, such material is "coming out of their ears". A Fissile Material Cut-off is on the global agenda since last year. All nuclear weapons states party to the NPT are already covered by this cut-off. The United States and Russia have stopped production of this material for military purposes because of their enormous surpluses. Britain, France and China are modernising their nuclear forces and are therefore not keen on the proposed agreement.⁶⁸

There are many technical, financial and environmental problems involved. Most of the facilities which have produced fissile material in the United States and Russia are highly contaminated, making it almost impossible for any inspection to be conducted. Decades of environmental, health and safety abuses have left an estimated 4,500 contaminated sites covering tens of thousands of acres in the United States. Some of these facilities of the American nuclear weapon complex are so extensively contaminated that they may be called "national sacrifice zones". The U.S. Energy Department which is responsible for the nuclear weapon complex estimates that a comprehensive clean-up could cost something in the range of \$ 500 billion over a period of 75 years.⁶⁹ A report entitled *Cooperative Denuclearisation: From Pledges to Deeds* prepared by scholars of Harvard University and published in 1993, says that from the frigid waters of the Barents Sea to the nuclear test site at Semipalatinsk in southern Kazakhstan and the naval base at Vladivostock the Soviet/Russian nuclear weapon complex has left "a legacy of environmental contamination across the entire length and breadth of the territory of the former Soviet Union".⁷⁰ The financial cost and the environmental hazards of a fissile material cut-off applicable only to the United States and Russia will be staggering.

The main targets of the proposed cut-off are Israel, India and Pakistan. As the complexities of a global, nondiscriminatory and reliably monitored cut-off are too great, an interim regional arrangement for South Asia is being suggested. This arrangement will have the most adverse effect on India's civilian nuclear enterprise. All nuclear power plants including those indigenously built, reprocessing facilities and research reactors will be brought under international inspection and control. In other words, it would amount to India's accession to the NPT. Pakistan, on the other hand, has a small-scale civilian nuclear programme while its nuclear facilities exclusively dedicated to the production of fissile material for military purposes are under military supervision and control. Israel's Dimona plutonium production reactor has produced sufficient quantities of fissile material for its weapon programme; it is now reaching the end of its life. A regional arrangement for a fissile material

cut-off would include verification of the material produced before the arrangement came into force. Thus it would be much worse than the proposed global, non-discriminatory and reliably verifiable cut-off. Such a regional arrangement will have the greatest impact on India. It is no longer a disarmament measure and, therefore, should be treated as a clever ploy in the pursuit of nonproliferation. Any regional arrangement on the nuclear question will be worse than joining the NPT. The kind of arrangements being mooted envisage a regime which will not permit what even the NPT allows. The verification system would entail opening up the entire fuel cycle and would incorporate mutual adversarial inspections leading to endless squabbles and providing opportunities for foreign intervention.⁷¹

The NPT Review and Extension Conference assembled in New York in April-May 1995 under a propaganda barrage highlighting the positive features of the global nuclear order. John Holum, Director of the U.S Arms Control and Disarmament Agency, had even hailed "the end of the nuclear arms race."⁷² The Review Conferences of 1975, 1980, 1985 and 1990 had witnessed acrimonious debates on the lack of progress toward nuclear disarmament, delay in the conclusion of a CTBT, technology controls and absence of security guarantees to the non-nuclear weapon states. It was expected that, like these conferences, there will be serious scrutiny of the working of the NPT before a decision could be taken on its extension. The beneficiaries of the present nuclear order, however, had evolved a concerted strategy to promote their agenda at the conference. As the decision on extension required a majority of parties to the treaty attending the conference, they embarked on obtaining adherence to the treaty by as many states as possible and ensuring their attendance at the conference.

By the end of 1989 there were 127 signatories to the treaty. The number swelled to 172 by 1995 and by the time the conference met the tally was 178. The Corfu Summit of the European Union, held on June 25, 1994, decided on joint action to make the treaty permanent; this involved a campaign to exert diplomatic and economic pressure on countries which seemed likely to raise uncomfortable issues at the conference. Australia, Britain, Canada, France, Germany, Italy and Japan, led by the United States, mounted this campaign. Some significant states were persuaded through economic assistance and security assurances to accede to the treaty — Belarus (July 22, 1993), Kazakhstan (February 14, 1994), Ukraine (December 5, 1994) Algeria (January 12, 1995), and Argentina (February 10, 1995). While this concerted campaign was going on, the non-aligned countries were in disarray; they could not agree on a common coherent policy to be pursued at the conference, mainly because many of them were parties to the treaty and were under great pressure to fall in line with the policies of the nuclear weapon powers.

The Clinton administration had set up a 24-hour monitoring operation in Washington to keep track of the shifting positions of delegates at the conference. Energy Secretary Hazzel O'Leary visited the conference at a critical moment and had discussions with about 90 ambassadors after which about a dozen non-aligned states decided to support unlimited extension. During the last 48-hours of the conference, President Clinton personally campaigned; he sent what an American official spokesman called "tough messages" to Egypt and Mexico saying that he would find it difficult to understand why friendly countries which had received American assistance could not be more cooperative. The Egyptian stand changed overnight. Miguel Marin Bosch, deputy leader of the Mexican mission, admitted that the American campaign was most impressive. Some delegates talked of great pressure from American embassies in their capitals and by American officials lobbying at foreign embassies in Washington. Adolfo Toyllhardat, leader of the Venezuelan delegation, resigned after his government changed suddenly its position from support for limited to unlimited extension of the treaty.⁷³

South Africa played a crucial role at the conference by presenting a package which linked a set of general proposals on nonproliferation and nuclear disarmament and for strengthening the review process with the indefinite extension of the treaty. This package became the axis around which the conference revolved. South Africa had a special status at the conference. It was the first ex-nuclear weapon state emphasising the virtues of renunciation. According to a report in the Washington Post of April 17, 1995 the American ambassador to South Africa had warned Foreign Minister Alfred Nzo on March 10 that an unwelcome position on the NPT would adversely affect American view of South Africa's "nonproliferation credentials"⁷⁴ More than half of the 111 sponsors of the Canadian Resolution seeking unlimited extension were small states most of which had neither the resources nor the need to develop nuclear weapons — Antigua and Barbuda, Benin, Cote d'Ivoire, Croatia, Fiji, Gabon, Grenada, Iceland, Liechtenstein, Malta, Marshall Islands, Federal States of Micronesia, Monaco, Republic of Palau, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Samoa, San Marino, Sao Tome and Principe, Solomon Islands, Tonga, Tuvalu and so on.

Voting on extension would have shown that a significant number of countries were dissatisfied with the manner in which provisions of the treaty had either been completely ignored or twisted to suit the requirements of the nuclear weapon powers. A large number of delegates called for the total elimination of all nuclear weapons and asserted that not much progress had been made in that direction. Jayantha Dhanapala, President of the Conference, presented a package of three "decisions" which, in his view, were generally acceptable to the delegates — "Strengthening the Review Process",

"Principles and Objectives for Nuclear Nonproliferation and Disarmament", and "Extension of the Treaty". The assembled delegates silently agreed to accept this clever compromise without casting their votes. Many delegates expressed their reservations at the outcome of the conference and delivered critical speeches after the decision. The Malaysian delegate declared that the conference had justified "nuclear weapons for eternity". The conference ended without a consensus Final Document on the review of the working of the NPT. The Principles and Objectives for Nuclear Nonproliferation and Disarmament stated, that "pending the entry into force of Comprehensive Test-Ban Treaty, the nuclear-weapon States should exercise utmost restraint. "Until the conference the official position of China and France was that they needed a few more tests to be conducted and they were in favour of a CTBT not later than 1996. However, the formulation contained in the conference document indirectly condones nuclear testing until a CTBT enters into force which, even if finalised by 1996, would require considerably more time for the required number of ratifications by legislatures of member countries in order to become operational. In the meantime all the nuclear weapon powers are required to exercise "utmost restraint".⁷⁵

Even before the Conference assembled, the United States, Russia, Britain and France stated in a declaration issued on April 6, 1995 that they welcomed the fact that "the nuclear arms race has ceased" but added that nuclear disarmament remained their "ultimate goal".⁷⁶ While the Conference was in session, there was the Clinton-Yeltsin Summit in Moscow of May 9-10 1995. They agreed upon further tightening of the nonproliferation regime and their joint statement made no reference to a CTBT or a fissile material cut-off. They did, however, said in a joint statement that taking into account the threat posed by global proliferation of missile technology, their countries must have the options to deploy theatre missile defence systems. These systems would be deployed "in a spirit of friendship" and not for use against each other.⁷⁷ It is the fear of ballistic missile programmes of certain developing countries which have led to proposals to protect not their territorial integrity but their forces or installations located abroad. There is a surfeit of technologies spawned by the Stars Wars project in the United States. The current favourite is the U.S. Army's Theatre High Altitude Area Defence (THAAD) system which will cost \$9.1b to complete with annual operation costs exceeding \$2m.⁷⁸ Deployment of theatre missile defences will put a stop to reductions in the strategic forces of the United States and Russia and by devaluing the deterrent effect of British, French and Chinese forces, will provide another excuse for these countries not to join the arms control process. It is difficult to think of any developing country which would have the strategic motivation, nuclear-missile capabilities and a highly irrational and irresponsible leadership that could necessitate such costly deployments. During the duration of the Extension Conference, it has

been estimated, the United States spent \$780 m on nuclear weapons and continued modernisation of its nuclear forces. Britain sent its first Trident ballistic missile submarine on patrol armed with nuclear weapons, France inaugurated construction of a new laser facility to simulate nuclear explosions, and Russia and China continued to produce new nuclear warheads.⁷⁹ The delegates, however, dispersed in a state of euphoria, having accomplished a historic task. But they were in for a shock.

China conducted its 42nd and 43rd nuclear tests on May 15, 1995 and August 17, 1995. President Jacques Chirac announced on June 13, 1995 that France intended to carry out a series of eight tests starting in September 1995 and ending by May 1996. This was an interesting example of the 'utmost restraint' to which they had committed themselves only a few weeks earlier. President Jiang Zemin declared on August 13, 1995 that China did not plan to stop tests until a global treaty banning nuclear tests came into effect. France has also adjusted itself to a similar position.⁸⁰ The delegates at the Extension Conference could not have been unaware of the intentions of China and France on the testing issue. The Chinese official spokesman had asserted several times that China would require a few more tests before 1996. Jacques Chirac, in his presidential campaign, had declared that if elected, he would order resumption of nuclear tests. It would have been more appropriate to persuade the Chinese and French delegates at the Conference to stop their intended tests rather than lodge protests when the tests were announced.

A Presidential Directive was issued in November 1993 authorising American laboratories an aggressive Stockpile Stewardship Programme to ensure "preservation of the core intellectual competencies in nuclear weapons" including weapons design. \$157.4m were set aside for this purpose for fiscal year 1994 and \$152.4m were asked for fiscal year 1995. There are plans to allocate \$1.2b for Weapons Research and Development and Testing Programme. This includes the construction of a Dual Axis Radiographic Hydro Test (DARHT) facility costing more than \$ 1 m. An Advanced Hydro Test Facility (AHTF) is proposed to be built with British participation over a period of 10 years costing more than \$400m. It is described as a "weapons designer's dream". There is also a proposal to build a National Ignition Facility (NIF) which may cost approximately \$4.5b. Its objective is to attain actual thermonuclear ignition within a confined target by producing 500 trillion watts of energy for 3 billionth of a second. The Russian laboratory Arzamas-16 is reported to have an advanced laser facility called "Iskra-5" capable of studying the physics for thermonuclear fusion. The French are collaborating with the American laboratories in building a similar facility in France.⁸¹ Thus a new generation of laboratory testing equipment is being built with the explicit objective of evaluating and maintaining the reliability — military usefulness — of existing stockpiles. The United States is reported to have offered assistance in simu-

lation technology to the Chinese government in order to to facilitate China's accession to the proposed CTBT. Simulation of nuclear explosions would amount to testing without nuclear explosions. As Vladimir Inkimets, a member of the Russian Academy of Sciences, has put it, "instead of test sites we will have the information test site."⁸²

President Clinton announced on August 11, 1995 that he favoured a "true zero" test ban thereby withdrawing U.S. support for so-called hydronuclear tests at the Geneva conference. But the United States is still committed to keeping its nuclear arsenal usable and President Clinton has reiterated his support for continued research at the three nuclear weapons design laboratories. He has also made it clear that he would invoke the withdrawal clause from the test ban treaty on the ground of "supreme national interest" if the appropriate American agencies ever certified their lack of confidence in the reliability of the U.S nuclear stockpile. Such a withdrawal would allow the United States to conduct tests to verify that defective weapons had been repaired. Other nuclear weapon states would have similar rights. It was officially stated that the support of the Joint Chiefs of Staff "is conditional on these safeguards"⁸³ Even when the Partial Test Ban Treaty had to be ratified by the U.S. Senate in 1963, the Joint Chiefs of Staff had insisted that the United States should be ready to resume atmospheric testing. It has been recently revealed that a project called "Safeguards C" consisting of three installations, one in the Nevada desert and two in the Pacific, has been maintained since then. By 1993 the project was estimated to have cost more than \$1b.⁸⁴ This enormous expenditure shows the state of readiness even for atmospheric testing. President Clinton's assurances to the Joint Chiefs of Staff have thus a historical precedent.

It can thus be assumed that so long as nuclear deterrence is the reigning security paradigm, nuclear testing will continue in some form or another. Whatever minor changes have taken place in the security policies of the nuclear weapon powers have had the effect of reinforcing their increased reliance on nuclear weapons, especially in the context of stopping nuclear proliferation. As Samuel Huntington put it, the primary objective of arms control now is "to prevent the development by non-Western societies of military capabilities that could threaten Western interests". This is done through treaties, economic pressure and controls on transfer of arms and weapons technologies.⁸⁵ Nuclear weapons are viewed as the keystone of the arch of freedom from war.⁸⁶ Nuclear deterrence is supposed to have kept proliferation at bay. To cope with this threat, a graduated array of nuclear and conventional weapons are needed. Some defence analysts are in favour of the United States retaining its preeminence in the military field so that it can intervene in the affairs of every state including nuclear armed original challengers. It is suggested that all the five nuclear weapon powers should coordinate their policies and, if necessary, participate in nuclear strikes.⁸⁷

In an article provocatively entitled "Lessons of the Next Nuclear War" whose publication coincided with the Extension Conference, the Director of the Project on East-West Relations at the prestigious Council on Foreign Relations, Michael Mandelbaum, has spelt out the manner in which the non-proliferation regime ought to be implemented in the future. He has bluntly stated: "The main obstacle to the spread of nuclear weapons is not the NPT but the United States". He has clarified that while the promise contained in the NPT to assist developing countries in the peaceful uses of atomic energy was "hollow", the promise of negotiations on nuclear disarmament was "false". Steep reductions and ultimate abolition of the arsenals of nuclear weapon powers would promote rather than discourage nuclear proliferation. Mandelbaum maintains that there are three types of states aspiring to have nuclear weapons and these require different strategies. The Allies of the United States depend on American security guarantees and therefore American nuclear capabilities should be kept in good working order. The second group of aspirant countries he calls the Orphans, of which the two prototypes are Israel and Pakistan. Both of them have been close allies of the United States without being members of any alliance system. The United States has disapproved of their nuclear weapon programmes but has not taken any effective measures against them. Then there are the Rogues including Iraq, Iran and North Korea. Their policies are radically contrary to American interests. Mandelbaum adds that in some respects India can also be included in the category of the Orphans without explaining his reasons for it.

According to Mandelbaum, the nuclear posture of the Allies depends on American security commitments, that of the Orphans on American diplomacy, and that of the Rogues on American military policy. The nuclear taboo will be violated under military necessity and in the future wars of nonproliferation the United States will have to play a preeminent role. He ominously concludes: "The next Hiroshima could create in American public opinion a consensus in favour of preventive war to keep the bomb out of the hands of the rogue states".⁸⁸ These musings are significant because they emanate from a sober nuclear analyst working in a prestigious American institution which reflects mainstream American perspectives on global issues.

The draft resolution presented by Argentina to the Security Council on July 12, 1995 seeks to affirm the Council's special responsibility to address the threat of nuclear proliferation and to take appropriate measures in case of any confirmed violations of relevant international treaties and conventions. It requests annual reports from the Secretary General on this issue to be submitted to the Security Council. This is a surreptitious effort to turn the five permanent members at the Council into the nuclear policemen of the world. India has rightly protested about the manner in which this proposal has been circulated as well as against its sinister implications.⁸⁹

The question raised by Niels Bohr continues to be relevant today: are nuclear weapons a perpetual threat to human security or a valuable instrument of state policy? Nuclear weapon states believe that these weapons of mass destruction in their possession ensure world peace and now can be used to stop any other country from acquiring them. Recent changes on the global chessboard have created a situation in which it is possible for the permanent members of the Security Council to assume the role of 'nuclear trustees'. President Truman had talked of a "sacred trust" in the context of the Anglo-American monopoly at the beginning of the nuclear age. Now it is being suggested that the nuclear weapon powers should perform the role of "nuclear trustees for the international community."

The Manhattan Project was initially started because of the fear of a German atomic bomb. As the project proceeded to its fruition, there was hesitation in using the bomb against Germany because of a possibility of German retaliatory nuclear attack. At a meeting of the Military Policy Committee on May 5, 1943, it was, therefore, decided that the best place to drop the bomb would be on a Japanese fleet concentration because it was believed that Japan had not embarked on any nuclear weapon programme of its own.³⁰ Thus an embryonic form of nuclear deterrence had emerged as early as May 1943. Since then the only plausible scenario of a nuclear attack is against a country which does not have nuclear weapons. This is a lesson which no non-nuclear weapon country can afford to forget.

(Concluded)

REFERENCE

30. Joseph I. Lieberman, *The Scorpion and the Tarantula: The Struggle to Control Atomic Weapons* (Boston, Houghton Mifflin, 1970), p.124.
31. Ibid., 161.
32. Ibid., 146.
33. For President Eisenhower's "Atoms for Peace" address December 8, 1953, see Robert C. Williams & Philip L. Cantellon (Eds.), *The American Atom* (Philadelphia University of Pennsylvania Press, 1984), pp. 104-114.
34. M. Zuberi, "Nuclear Safeguards: The Servitudes of Civilian Nuclear Technology" in K. Subramanyam (Ed.), *Nuclear Myths and Realities: India's Dilemma* (New Delhi, ABC Publishing House, 1981), pp.1-20.
35. Joseph S. Nye, Jr., "NPT: The Logic of Inequality", *Foreign Policy*, Summer 1985, pp. 123-31.
36. Theo Sommer, "Germany's Reservations", *Survival*, Vol. IX, No. 5, 1967, p. 144. and Carl F.von Weizsacker, "Nuclear Inspection", Ibid., p. 148.
37. SIPRI, *The Near-Nuclear Countries and the NPT*, (New York, Humanities Press, 19, 1972) pp. 5 1-67.

38. Ibid., pp. 35-42; Ryukichi Imai, "The Non-Proliferation Treaty and Japan", *Survival*, Vol. XI, No. 9, September 1969, pp.280-86.
39. Ryukichi Imai, "NPT Safeguards Today and Tomorrow", *Disarmament*, Vol. XV, No. 2, 1992, pp. 47-57.
40. Ibid., p. 51.
41. Abraham Ribicoff, "A Market-Sharing Approach to the World Nuclear Sales Problem", *Foreign Affairs*, Vol. 54, No. 4, July 1976, pp. 764-87; Paul L. Jaskow, "The International Nuclear Industry : The End of the Nuclear Monopoly", Ibid., pp.788-803;
42. William O. Lawrence, "Nuclear Futures for Sale: To Brazil from West Germany, 1975", *International Security*, Vol. 1, No. 1, Fall 1976, p. 24; Juan E.Gugliamelli. "The Brazillian-German Nuclear Deal: A View from Argentina", *Survival*, Vol. XVIII, No. 4, July/August, 1976, pp.162-65; Edward Wonder, "Nuclear Commerce and Nuclear Proliferation: Germany and Brazil, 1975", *Orbis*, Vol. 21, No. 2 pp. 277-306.
43. Michail J. Brenner, *Nuclear Power and Non-Proliferation: The remaking of U.S. policy* (Cambridge, Cambridge University Press, 1981), pp. 186-99. This is a readable account of major shifts in U.S. nuclear policies during the 1970s.
44. Brahma Chellaney, *Nuclear Proliferation: The US-Indian Conflict* (New Delhi, Orient Longman, 1993), p. 76; Michael Brenner, op.cit., pp.199-204.
45. M. Zuberi, op.cit.
46. Rykichi Imai and Henry S. Rowen *Nuclear Energy and Nuclear Proliferation: Japanese and American Views* (Boulder Colorado, Westview Press, 1980). The American posture from the very inception of the nuclear era has been that of "God-granted guardian of this dangerous technology" p. 7.
47. Michail Brenner, op.cit., pp. 204-12; SIPRI; *Nuclear Energy and Nuclear Weapon Proliferation* (London, Taylor & Francis Ltd., 1979), pp. 261-69.
48. Pierre Lellouche, "International Nuclear Politics", *Foreign Affairs*, Winter 1979/80, p. 349; Gerhard Smith and George Rathjens, "Reassessing Nuclear Nonproliferation Policy", *Foreign Affairs*, Spring 1981, p. 887.
49. Jeremy Stone, "On Proliferation: Where's the Danger", *Bulletin of the Atomic Scientists*, November 1965, p. 17.
50. Richard H. Ullman, "The Covert Connection". *Foreign Policy* No.75, Summer 1989, pp.19-19; Bertrand Goldschmidt & Myron B. Kratzer, *Peaceful Nuclear Relations: A Study of the Erosion of Confidence* (New York, The Rockefeller Foundation and London, The Royal Institute of International Affairs, November 1978).
51. Rolf Ekeus, "The United Nations Special Commission on Iraq: activities in 1992" in *SIPRI yearbook 1993; World Armaments and Disarmament* (Oxford, Oxford University Press, 1993), pp. 691-703; Roland M. Timerbaev, "The 1995 NPT Review Conference and IAEA Safeguards" *Disarmament, Topical Papers IO*, 1992, p. 122; Hans Bfix, "The Non-Proliferation Outlook", *Disarmament*, Vol. XVI, No. 2, 1993, pp.1-20; Harald Muller & Lewis S. Dunn, *Nuclear Export Controls and Supply Side Restraints: Options for Reforms?* PPNN Study Four, October 1993; George Bunn & Roland M. Timerbaev, *Nuclear Verification under NPT : What should it Cover -- How Far it May Go?* PPNN Study Five, April 1994.
52. Institute for Science and International Security, *South Africa's Secret Nuclear Weapons*, ISIS Report, May 1994.

54. Ibid.
55. PPNN *Newsbrief* No.27, 3rd Quarter 1994, pp.1-6 and PPNN *newsbrief* No. 29, 1st Quarter 1995, pp.6-8; PPNN *Newsbrief* No. 30, 2nd Quarter, 1995, p.12.
56. Les Aspin, Secretary of Defence, *Report on the Bottom-up Review*. October 1993 John Isaacs, "Bottoms up", *Bulletin of the Atomic Scientists*, November; 1993, pp. 12-13.
57. *USIS Wireless File*, December 8,1993; Brad Roberts, "From Nonproliferation to Antiproliferation", *International Security*, Vol. 18, No. 1, Summer 1993, pp. 139-173; Oliver Morton, "Defence Technology: The Information Advantage", *The Economist*, June 10, 1995, pp. 16-17.
58. See Joseph F. Pilat & Walter L. Kirchner, "The Technological Promise of Counter Proliferation", *The Washington Quarterly*, Winter 1995, pp.153-66.
59. Pavel Grachev quoted in "Russian (C.I.S.) Strategic Nuclear Forces End of 1994", *Bulletin of the Atomic Scientists*, March/April 1995, p. 78.
60. Thomas W. Dowler, "Countering the Threat of the Well-Armed Tyrant:A Modest Proposal for Small Nuclear Forces", *Strategic Review*, Fall 1991, pp. 30-4); William M. Arkin, "Nuclear Junkies: Those Lovable Little Bombs", *Bulletin of the Atomic Scientists*, July/August 1993, pp. 22-27.
61. Mary C. FitzGerald, "The Russian Image of Future War", *Comparative Strategy* Vol.13, 1994, p. 179.
62. "Known Nuclear Tests Worldwide, 1945-1993", *Bulletin of the Atomic Scientists* May/June 1994, pp. 62-63; "Kown Nuclear Tests Worldwide, 1945-1994", *Bulletin of the Atomic Scientists*, May/June 1995, pp. 70-71.
63. David Holloway, *Stalin and the Bomb* (New Haven, Yale University Press, 1994), pp. 326-28; PPNN *Newsbrief* No. 27, 3rd Quarter 1994, p. 17; PPNN*Newsbrief* No. 29, 1st Quarter 1995.
64. M. Zuberi, "Toward A Non-Nuclear World: Scientists and a Comprehensive Nuclear Test Ban", *U.S.I. Journal*, July-September 1992, p. 294.
65. Refer to note no. 62.
66. Georges Fischer, *The Non-Proliferation of Nuclear Weapons* (London, Europa Publications, 1971), pp. 56-58.
67. "Uranium, plutonium, pandemonium". *The Economist*, June 5-11,1993, pp. 78-80; John P. Holdren, "Dangerous Surplus", *Bulletin of the Atomic Scientists*, May/June 1994, pp. 39-41; Frans Berkhout, Oleg Bukharin, Harold Feifson and Marvin Miller "A Cutoff in the Production of Fissile Material", *International Security*, Vol. 19, No. 3, pp. 167-202; David Albright, Frans Berkhout and William Walker, *World Inventory of Plutonium and Highly Enriched Uranium 1992* (SIPRI, Oxford University Press, 1993).
68. Berkhout, Bukharin, Feifson and Miller, *op.cit.*
69. *Defence Monitor*, Vol. XXVIII, No. 2,1994, pp. i-3; Linda Rothstein, "Nothing Clean about 'Cleanup'", *Bulletin of the Atomic Scientists*; May/June 1995, p. 34.
70. Graham Allison, Ashton B. Carter, Steven E. Miller & Philip Zelikov (Eds.), *Cooperative Denuclearization: From Pledges to Deeds* (Cambridge, Mass, Harvard University Press, 1993), p. 228.

71. *PPNN Study Four*, October 1993.
72. *Disarmament*, Vol.XVII, No. 1, 1995, p. 11.
73. Joseph Cirincione in "An ACDA Briefing on Indefinite Extension and on the Moscow Summit", *Arms Control Today* June 1995, p.16; Barbara Crossette, "Treaty Aimed at Halting Spread of Nuclear Weapons Extended: 170 Nations Agree to Continue Pact Indefinitely". *The New York Times*. May 12, 1995, pp. A1 and A10.
74. Tom Zamora Callina, "South Africa Bridges the Gap". *Bulletin of the Atomic Scientists*, July/August 1995, pp. 30-31.
75. *PPNN Newsbrief*, No. 30, Second Quarter 1995, pp.2-4 and 26; William Epstein, "Indefinite Extension—with Increased Accountability", *Bulletin of the Atomic Scientists*, July/August 1995, pp. 27-30.
76. *PPNN Newsbrief* No. Second Quarter 1995, p. 26.
77. John Pike, "Stars Wars is Back:Dangers for the ABM Treaty", *INESAP Information Bulletin*, Issue No.6. July 1995, p. 11.
78. John Pike, "Theatre Missile Defence Programmes:Status and Prospects", *Arms Control Today*, September 1994, pp. 11-14; David Mosher and Raymond Hall. "The Clinton Plan for Theatre Missile Defences:Costs and Alternatives", *Arms Control Today*, September 1994, pp. 15-20.
79. Hans M. Kristensen and Joshua Handler, "Changing Nuclear Targets", *INESAP Information Bulletin*, Issue No. 6, July 1995, pp. 1 and 3.
80. "China not to stop N-tests", *Indian Express*, August 14, 1995.
81. Tom Zamora Collina and Ray E. Kidder, "Shopping Spree Softens Test Ban Sorrows", *Bulletin of the Atomic Scientists*, July/August, 1994, pp. 23-29; Burroughs, Jacqueline Cabasso, "Nuclear Weapons Testing: Now and Forever?", *INESAP Information Bulletin*, Issue No. 6, July 1995, pp. 1,4-7;
82. Burroughs and Cabasso, *op.cit.*, p. 6.
83. "Clinton Endorses Ban on All Atomic Tests", *International Herald Tribune*, August 12-13, 1995.
84. *PPNN Newsbrief* No. 22, Sacred Quarter 1993, p. 6.
85. Samuel Huntington; "A Clash of Civilizations?", *Foreign Affairs*, Vol. 72, No. 3, Summer 1993, p. 46.
86. Michael Quinlan, "Nuclear Weapons and the Abolition of War", *International Affairs*, vol. 67, No, 2, April 1991, pp. 203-301.
87. George H. Quester and Victor A. Utgoff, "Toward an International Nuclear Security Policy", *The Washington Quarterly*, Vol. 17, No. 4, Autumn, 1994, pp. 5-18.
88. Michael Mandelbaum, "Lessons of the Next Nuclear War" , *Foreign Affairs*, Vol. 74, No. 2, March/April 1995, pp. 22-37.
89. Quester and Utgoff, *op.cit.*
90. For a comprehensive analysis of the atomic bombing of Hiroshima and Nagasaki, see Gar Aleperovitz, *The Decision to Use the Atomic Bomb* (New York, Alfred A. Knopf, 1995).

Data Protection and Information Security

B. RAMAN

“The explosion in communication channels and information technology (IT) presented both an opportunity and a threat.....Growing reliance on IT, not just by the military, but also by the business and financial sectors, points to a troubling vulnerability. An important priority in the coming years would be to protect US information systems from disruption and exploitation.”

Testimony of Mr. John Deutch, Director of the Central Intelligence Agency (CIA) of the USA before the House Select Intelligence Committee on December 19, 1995.

VULNERABILITIES OF IT SYSTEMS : SOME REPORTED EXAMPLES

(a) When the allied planes started bombing Iraq at the beginning of the Gulf War in January, 1991, the Iraqi Army Headquarters found that its sophisticated communication networks with many field formations had stopped working. It was suspected to be a case of the system being affected by a malicious software introduced by the US called a “time-bomb”, a type of virus which remains dormant and activates itself or is activated from outside at a pre-fixed time.

(b) In August, 1995, the Australian Navy ordered an enquiry into an incident in which when a new software produced by a US company was commissioned, the computer transferred some of the electronic files to the headquarters of the company in the US. It was suspected to be a case of another malicious software called “a trojan horse” which carries out clandestine tasks programmed by the producer without the knowledge of the user.

(c) In October, 1995, operating from a terminal in Moscow, an unemployed mathematician and computer expert managed to break into the computer network of a bank in New York and electronically transfer a large amount to the account of an accomplice in a third city. A day later, the accomplice withdrew the amount and disappeared from the city. On

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detecting the breach, the security officer of the bank decided to lay a trap to identify and catch the culprit. He did not change the security drill and lulled the hacker into believing that his crime had not been noticed. A few days later, the culprit in Moscow again broke into the New York bank network and electronically transferred another large amount to the account of an accomplice in a different city. When the accomplice went to the bank to withdraw the amount, the police were waiting for him. The entire gang was arrested and sentenced to imprisonment in January, 1996. This was a simple case of electronic criminal trespass and theft in New York carried out by a hacker from a computer terminal in Moscow without ever having set foot in US territory.

IMPORTANCE OF IT SECURITY

An outsider's ability, with or without the complicity of an insider, to penetrate computer networks, which are often telephone-dependent, poses a threat not only to banks and other financial institutions etc, but also to national security. Data networks are vulnerable to the twin threats of theft of classified data by external elements and the distortion or obliteration of sensitive data through malicious software introduced into the system without the knowledge of the user. Distortion forces the victim into wrong decisions on the basis of incorrect data and obliterations makes essential data unavailable in times of need and emergencies such as war.

Communications and computer security has received increasing attention in the developed countries since the 1960s, with the Ministries of Defence made responsible for it. In the US, the National Computer Security Centre (NCSC) of the Defence Department has brought out an "Orange Book" on IT security. In the UK, the Communications and Electronic Security Group (CESG) of the Government Communications Headquarters (GCH) has similarly brought out a "Green Book". Similar manuals have been produced by the Defence Ministries of Germany, France and Netherlands.

These manuals instruct not only sensitive Government departments, but also industries and firms having a supply relationship with them on how to ensure IT security. Periodic checks of the security systems of such industries and firms are made by MOD staff and lax security could lead to cancellation of contracts.

The US Computer Fraud and Abuse Act of 1986 penalises, inter alia, "knowingly obtaining information that has been determined by the US Government to require protection against unauthorised disclosure for reasons of national defence or foreign relations or any restricted data as defined in the

Atomic Energy Act of 1954." It also makes it a crime to have "unauthorised access to a computer which is exclusively for the use of the Government of the US" even if no data is thereby obtained. Separate legislation to deal with attempts to introduce malicious software was also on the anvil. Such software are of three categories— a "virus" which disables a system, a "timebomb" and a "Trojan Horse".

The UK Computer Misuse Act of 1990 makes it a crime to have unauthorised access to a computer programme, with or without the intention to commit another crime or to modify the programme or data.

PARAMETERS OF A GOOD DATA SECURITY SYSTEM

The first pre-requisite is a Data Security Officer with a good knowledge of how various networks operate and what can go wrong and how. The old type of generalist security officers, who are good essentially in physical security and not in what is described as the logical security of sophisticated software, would no longer be able to adequately meet the security requirements of any establishment using networks for storing and processing sensitive data. Where the security set-up of an establishment is headed by a generalist, he has to have the assistance of IT experts specially trained in IT security procedures.

Based on their performance, Data Security Officers could be divided into the following categories:

- (a) **OUTSTANDING** : Has the ability to prevent breaches of data security and his safeguards are effective.
- (b) **VERY GOOD** : His preventive measures are not that effective, but when a breach takes place, he immediately detects it and is able to lay a trap to identify and arrest the culprit and, at the same time, enforce effective damage control measures. A good example would be that of the Security Officer of the New York bank mentioned above.
- (c) **GOOD** : He is alert enough to detect a breach in time and enforce damage control measures, but is unable to identify and catch the culprit.
- (d) **BAD** : Remains totally oblivious of security breaches till considerable damage has been done to the establishment by theft, distortion or obliteration of sensitive data.

An establishment should try to have Data Security Officers who are at least very good, if not outstanding, but this is easier said than done. A statis-

tical analysis of breaches of computer security in the UK brought out a three-fold increase of breaches from 4 per cent of inspected establishments in 1981 to 13 per cent towards the end of the 1980s. Since not all the establishments were inspected for the purpose of this study, the presumption was that there must have been many more breaches. The analysis also revealed that only 40 per cent of the reported breaches were detected by alert Data Security Officers on their own. In the remaining 60 per cent of the cases, the breaches came to notice accidentally when users complained of incorrect data or other malfunctioning of the system.

WHAT NEEDS TO BE PROTECTED

The first task of a Data Security Officer is to establish, in consultation with the senior management officers of the establishment, what data needs to be protected. All data cannot be and need not be protected. Only sensitive data, damage to which or leakage of which, would affect national or establishment or industrial or business security needs to be protected. This would call for a system of classification of sensitive data. He should avoid the tendency to over-classify. The greater the classification the less the security.

RISK ANALYSIS

Having decided what needs to be classified, the DSO should undertake an analysis of the type of risks which could arise and against which protection has to be ensured. Governments and private organisations in the West have produced a number of packages for this purpose which enable even IT-literate staff with no previous experience of IT security to undertake a thorough risk analysis and management programme.

Even in the absence of such packages, it should be possible for a competent DSO to make a risk analysis on the basis of his local knowledge and previous experience. Risks to computer security mainly arise from the following factors:

(a) THE HUMAN ELEMENT

- (1) Careless members of the staff who are not security-conscious and cause damage through inadvertent acts of negligence.
- (2) Disgruntled members of the staff who cause damage either on their own or at the instance of outside elements in order to "punish" the management.
- (3) Members of staff having weaknesses which are exploited by outside elements for pressurising them to disclose or damage data.

(b) THE TECHNICAL ELEMENT

- (1) Possibility of data accidentally getting into the hands of external elements due to technical reasons such as telephone cross-connection during data transmission.
- (2) Risks arising from a dial-in facility which exposes the network to telephone-tapping.

(c) EXTERNAL ELEMENTS

- (1) Theft of data (espionage) with or without the help of an inside accomplice.
- (2) Distortion or obliteration of data through the introduction of malicious software.

RISK MANAGEMENT

What are the security measures required for managing each of these risks?

CARELESSNESS OR LACK OF SECURITY CONSCIOUSNESS

- (1) Frequent training classes and seminars in order to create an awareness of how things can go wrong and improve the level of security-consciousness.
- (2) Prepare a list of staff whose security-consciousness is high and who are totally dependable and only authorise them to handle sensitive data. Even this authorisation should be divided into the following grades:
 - (a) CATEGORY I (Highest) : Those authorised to read, input, modify or erase data. Their number should be very small and confined to senior levels.
 - (b) CATEGORY II (Medium) : Those authorised to read, input or modify data, but cannot erase.
 - (c) CATEGORY III (Low) : Those authorised only to read data. but cannot input, modify or erase.

All those not falling in any of these authorised categories should not have access to the network or computer used for storing and processing classified data. Keep a list of authorised persons and a log of uses of the computer by authorised persons and make periodic surprise checks to prevent unauthorised persons from having access.

- (3) Delink the computers of unauthorised persons such as the receptionist, the staff of the administrative and accounts branches etc from the main or corporate network to prevent the possibility of accidental disclosure of sensitive data to them.

To ensure that only authorised persons have access to the network according to the level of their security clearance, introduce a system of identification and authentication so that the network knows that the person who is trying to have access to it is duly authorised to do so. Amongst the various methods available are the use of passwords, to be changed frequently, badges or tokens in the form of magnetic stripe cards, complex keys and "smart cards" with micro-chips etc. Biometric devices for recognition which use the characteristic features of signatures, finger and palm prints, voices etc are also increasingly coming into use, but they can be very expensive and not totally reliable. A combination of passwords and badges/tokens, if used properly, should provide safe means of identification.

Even a security-cleared and duly-authorised person may be won over by outside elements by taking advantage of any weaknesses he may have in order to make him betray or distort data. Computer files, unlike the old paper files, are specially vulnerable to the risk of what is called repudiation, that is, an authorised member of the staff, won over by outside elements, deliberately inputting wrong data or distorting existing data and later on denying responsibility for it. There should, therefore, be a system of every input, modification or erasure being authenticated by the person doing it. An additional safety precaution could be the two-person rule under which there should always be two persons operating a sensitive computer or terminal.

The above measures should also take care of the risks from disgruntled members of the staff. The best protection against them is to ease them out through dismissal or retrenchment, if possible, or through a golden handshake, if necessary.

THE TECHNICAL ELEMENT

The risks from the technical element arise from the dependence on telephones for data transmission. Information system networks are of two categories—the Local Area Network (LAN), which is normally confined to a single building or a group of buildings inside the same perimeter and the Wide Area Network (WAN), which is spread over a wide geographic area, covering many cities and may be, even countries. WANs depend on telephones for data transmission. This exposes the network to the following risks:

- (a) Sensitive data accidentally falling into the hands of outside elements through cross-connection.
- (b) An outsider, getting details of the identification and authentication drill, activating the system over phone in order to steal, distort or destroy data. This is what is called the risk of masquerading.
- (c) Theft, distortion or erasure of data through telephone-tapping.

The following counter-measures could be useful:

- (a) Avoid dependence on telephones in the case of LANs.
- (b) Avoid direct dial-in arrangements in the case of WANs. Use the dial-back modems which call back the genuine authorised number, satisfies itself that the call was really from that number and not from a masquerader and then only puts through the connection and port protection devices at the end of each link. They exchange codes and only if the calling number replies with the correct code would the called number put through the connection.
- (c) Use coding and decoding devices for sensitive data.
- (d) Have an arrangement for an immediate acknowledgement from the number to which data is transmitted confirming its safe receipt. If it reports non-receipt, presume that the data has fallen into wrong hands due to cross-connection and take appropriate damage control measures such as changing the code for future messages etc.

OUTSIDE ELEMENTS

Theft (espionage) of data by outside elements could be committed either:

- (a) With the help of an insider who removes in recorded floppies, orally discloses, distorts or destroys data; or
- (b) Through the telephone; or
- (c) By recording with or without the help of an insider the electromagnetic fields radiated by a computer screen.

An insider could be either

- (a) An employee of the establishment authorised access to the data; or
- (b) An employee of an agency which services the system in the establishment; or

- (c) Customers and others who have an opportunity of visiting the establishment.

Counter-measures in respect of staff and telephones have already been explained. Certain general precautions would also be advisable such as:

- (a) Surprise checks at gates to detect any floppies or other software being taken out.
- (b) Employees of servicing agencies being always accompanied and supervised by a senior officer of the establishment.
- (c) Changing passwords and other authentication keys after the servicing.
- (d) Not allowing customers and other outside visitors into areas where the network computers are kept and holding discussions with them in a separate conference room to be kept reserved for the purpose.

Protection against recording of electro-magnetic radiations could be provided by the following means:

- (a) Special design of computer equipment either to reduce such radiation or to distort it through spoiling signals, similar to the use of telephone scramblers.
- (b) Shielding and filtering out the radiation.

INTRODUCTION OF MALICIOUS SOFTWARE

For introducing malicious software also complicity of an insider of one of the above-mentioned categories would generally be required. This risk could be eliminated through the strict observance of the following:

- (a) A total ban on the staff bringing their personal software to office and using it on official computers.
- (b) Purchasing floppies and other software of dependable quality in bulk in sealed packets and not in loose quantities from a reliable dealer.
- (c) Maintaining a list of reliable dealers and rotating the source of purchase so that the outside elements are not able to guess from whom you are going to procure the next lot.
- (d) Treating with suspicion all gifts and free samples of software and not using them till they are tested and certified to be virus-free.

- (e) Having all new software tested by experts for virus etc in a special computer or computers kept reserved for this purpose before introducing them into the information system.
- (f) Briefing the staff that if they suspect a virus etc, they should keep the computer on and immediately alert the DSO and the experts concerned so that they can take counter-measures. The staff should not remove the software and try them on other computers. They would thereby facilitate the propagation of the virus.

CRISIS MANAGEMENT

According to what is known as Murphy's Law, in any system where things can go wrong, they would most probably go wrong one day despite all the precautions one might take. A good Chief Executive would keep this in view and keep in readiness a Crisis Management Plan. When a crisis occurs, he and his staff would know what to do. On the other hand, a bad Executive would be so confident that under his leadership nothing can go wrong that he would neglect crisis management planning. And when there is a crisis, there would be panic and he and his staff would be running around in circles, not knowing what to do.

A good crisis management plan would provide for the following:

- (a) Stand-by arrangements if the entire system is damaged.
- (b) A back-up master copy of all data to be kept in a safe place which can be brought into use if the data in the network is accidentally or maliciously destroyed. Such a master copy would also be necessary to identify distortions of data through comparison if the data is suspected to have been tampered with.
- (c) A drill for the reconstruction of the data with the help of subordinate offices etc where some of the data might be stored, if the back-up copy is also destroyed.

This note does not cover the following:

- (a) Damages to information systems from acts of God or nature such as fire, water seepage, floods etc.
- (b) The various documents, logs etc to be kept regarding issue of stores, movement of persons, equipment etc inside the establishment. The requirements will vary from establishment to establishment.

Arms and the Man

VICE ADMIRAL MIHIR ROY PVSM, AVSM (RETD)

CHANGING NATURE OF CONFLICTS

The nature of war has been undergoing a qualitative as well as a structural change which influenced the development of weapons and tactics. The Napoleonic Wars first brought in the concept of national armies which continued to restrict casualties to the battle field but spilt pillage and booty gathering into the non-combatant sectors. Thereafter, national wars graduated to trench warfare followed by Blitzkrieg, armoured thrusts and thousand bomber raids of an unprecedented nature. In the 1939-45 World War, the Soviet Union alone suffered 20 million casualties which in a way demonstrated the diabolical inventiveness for liquidating humanity with machine guns, tanks, artillery, bombers and nuclear weapons. Victors and vanquished lay equally prostrate with both requiring reconstruction and rehabilitation in equal measure.

The Super Power confrontation further encouraged the armament industry to produce weapons of destruction with value added costs for maintenance, serviceability and training. Above all, it was the race for nuclear parity between the NATO and Warsaw Pact which paradoxically gave the world a measure of stability. The big nations, however, resorted to surrogate wars mostly in the Third World countries to impose their views of a New World Order. Petro-dollar countries were wooed by the Big Powers to bank roll their muscle in West Asia, Vietnam, Cambodia, Sub-Continent and Kuwait. The military-industrial complex which in a way was the mainstay of industrial nations thrived in such an environment where human life was considered cheaper and more effective than resorting to the negotiating table.

CULT OF SMALL ARMS

But with the end of the cold war and the breakdown of bipolar control, the restriction on the long simmering civil, ethnic and territorial disputes gave rise to a hundred armed conflicts since 1989 which henceforth were dominated by small arms of less than 50 mm category such as AK 47, AK 56, mortars, land mines, RDX, rockets and hand held missiles. The arms bazaar also shifted to narcotic linked distribution locales such as the Golden Triangle in the North

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East and Golden Crescent in the North West of the Sub Continent. The Kurdish rebellion, Afghan Civil War, Myanmar, Cambodia, West Asia and several other countries in Asia were fuelled by at least four major arms bazaars in Pakistan as also Osh in Kyrgyzstan, Nanning, Pingyuan in Yunnan and Cox's Bazaar in Bangladesh. These light arms found their way into every continent with the main killing fields being Afghanistan, Kashmir/Punjab, Cambodia, Sri Lanka, Bosnia, Angola and Khurdistan. South America belonged to yet another drug related segment...

INDIA'S ASYMMETRICAL DEFENCE BUDGET

It was, therefore, apparent, more by convention than perhaps logic that land forces usurped the major chunk of the defence budget in Asia although expensive armoured divisions of the Indian and Pakistan armies were not utilised even in the 1971 Indo-Pak War when Pakistan lost half her territory and the major segment of her population. Therefore, the army's share of 57 per cent of the Defence Budget in providing main battle tanks at Rs. 25 crores per piece and hardly usable in to-day's low level conflict scenario merits a cost-kill evaluation particularly as territories captured with blood and valour such as Haji Pir Pass and Golan Heights needed to be returned to their owners, sooner than later. The overall strategy should instead be to inflict unsustainable collateral damage on the enemy's war machine, military-industrial complex and infrastructure such as communication facilities, ports, oil tanks, power stations and waterways so as to deter adventurism on the expectation of short wars and U.N. intervention.

THE INDIAN OCEAN SYNDROME

The end of Super Power confrontation, the demise of apartheid and the liberalisation of India's economy has underlined the growing importance of the hitherto neglected Indian Ocean which Mahan had uncannily predicted would be the 'ocean of destiny in the 21st century'. Moreover, the 'kick start' given by President Mandela in January 1995 to the formation of an Indian Ocean Trading Bloc further extended the Asia-Pacific boundary which had tended to end at the Malacca Straits and thus fused geographical boundaries with strategic frontiers. India's recent admission as a full dialogue member of Asean also enlarged Delhi's areas of interest and brought India closer to China's interaction in the South China Seas which is causing uneasiness in the Philippines and South East Asia. Similarly in the Bay of Bengal where Beijing has forged close connections with Myanmar, the maritime flash points are Coco Islands, Kachchativu and New Moore Island. Sir Creek continues to be a bone of contention with Pakistan. Hence, as national development is linked to national security, being two sides of the same coin, they merit similar levels

of interaction within and between nations.

SHIFT FROM ATLANTIC-PACIFIC TO PACIFIC-INDIAN OCEAN

It can, therefore, be reasonably predicted that by the first quarter of the new century, the centre of gravity of the world's economic, strategic and political dynamics would have shifted from the Atlantic-Pacific to the Pacific-Indian Ocean combine entailing massive investments by India in highways, ports, communications, environment, education and health. The future G-7 countries could well be the US, China, Japan Germany, India, Indonesia and Brazil. Moreover, the proposed Indian Ocean Trading Bloc will enhance regional identity in this brittle and disparate ocean segment. South Asia, South Africa and Australia in a way comprise the strategic and economic triangles of the Indian Ocean.

India, therefore, needs to energise trading blocs by reducing tariff barriers to achieve greater economic convergence as also to remove the psychological apprehension that 'big India' will not impose trade or fiscal imbalances. On the other hand, such a grouping of developing countries, unlike, competing industrial nations, will have a harmonising influence on the region's strategic, economic, cultural and industrial tapestry. For example, ASEAN has been able to absorb differing political and economic systems such as Cambodia, Laos, Vietnam and Myanmar.

NUCLEAR PROBITY

Asia-Pacific is still another example where in spite of being the most weaponised segment, ASEAN members have signed the South East Asian Nuclear Weapons Free Zone Treaty which, in a way, encroaches on their sovereignty. India, on the other hand, with her impressive track record in nuclear, space and missile technologies and backed by the world's fourth largest armed forces, still finds herself in the dreary sands of a strategic vacuum of whether to continue with its policy of nuclear ambiguity or take an unequivocal stand on the Comprehensive Test Ban Treaty while going ahead with the testing of Prithvi and Agni missiles.

India needs to become economically viable and technologically more self reliant to contest the various regimes such as NPT CTBT, MTCR, labour laws and environmental measures which are being constantly devised to influence large developing countries such as India and Brazil. It is, therefore, not surprising that greater pressure has been brought on the 'soft state' of democratic India than perhaps on Israel or Pakistan. On the other hand, a blind eye has been turned on China inspite of her poor human rights record, covert

missile and nuclear exports and pirating of intellectual property against the background of the unlikely transition from authoritarian power to political pluralism when President Jiang Zemin succeeds Deng Xiaoping. This is the price extracted for obtaining China's support in the Security Council for the Third Cold War (Soviet Union and Afghanistan being the earlier ones) for the containment of Iran, Iraq, Libya and Afghanistan.

RESTRUCTURING THE INDIAN NAVY

There is hence an urgent need to not only modernise but restructure India's Navy and Air Force with force multipliers, air to air refuelling, AEW/AWACS and 'Beyond Visual Range' (BVR) missiles in all three dimensions for as Sun Tzu stated hundreds of years before 'Desert Storm' that 'victorious armies win before seeking battle'. The Navy will, therefore, initially require a larger share of the Defence budget, than the present 13 per cent. In developed countries there is a greater symmetry between the budgets of the three services. But currently even PLA dominated China and an army influenced Thailand has corrected a similar imbalance. It is interesting to note that Pakistan has awarded their navy nearly 70 percent of the one billion dollars worth of arms as a result of the Hank Brown Amendment. This Washington largesse consists of three P-3C Orions for a total of \$ 390 millions, 28 Harpoon missiles priced at \$ 361 millions, 360 AIM 9L missile components costing \$ 2.66 millions and MK 46 torpedoes and miscellaneous items adding up to another \$ 2.86 million which make a total of \$ 779.47 millions of advanced maritime hardware.

The structuring of an Economic Warfare division hence merits consideration as also the need to station 'Sea Control Ships' with strike and interceptor aircraft well out at sea to enforce a crippling blockade in order to checkmate Pakistan's Sea denial strategy.

The high priority given to modernising China's Navy is another indicator of Beijing's progress from 'brown water' and 'green water' (EEZ) to 'blue water' capabilities as observed from Vice Admiral Mingsheng's statement that 'compared with the army which cannot go beyond the national boundaries, an international navy can project its presence far away from home and is the pillar for the country's foreign policy and the embodiment of the nations will and power'.

CONCLUSION

India will, therefore, need to address herself more and more to her maritime issues such as security of her seaborne trade, safety of sealanes of communication (SLOCS), protection of offshore platforms as also project a

maritime strategy to deter adventurism. Moreover, regional homogeneity could also be better achieved by New Delhi taking the opportunity to dialogue on a spectrum of regional issues by utilising the ASEAN Regional Forum both for trade and security.

Hence, when one looks at the changing currency of military - economic power and the evolution of strategic affairs in the Indian Ocean region, it is difficult to conclude other than in the decades ahead an awakened and economically viable Indian Ocean community with transparent maritime muscle will have a more credible impact in lowering the threshold of conflict thus providing stability for initiating social, economic and environmental measures than solely concentrating on border confrontations. The rimland whale appears to have at last shown her multi purpose personality to the continental elephant.

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Operation Felix : Hitler's Plan to Capture Gibraltar

MAJOR GENERAL D K PALIT, VtC (RETD)

Historiography does not necessarily register all the crises of history. Some episodes, especially of military history remain unrecorded despite their importance at the time--simply because their potential for strategic disaster (or spectacular success) was never fulfilled: the period of significance passed without the anticipated climacteric. One such episode came into my ken when I went to Gibraltar last summer to spend a holiday with an old friend from the Gurkha Brigade of Britain, Field Marshal Sir John Chapple, now the Governor of the Colony.

Among the acknowledged "musts" for a visitor to Gib is a tour of the innards of the Rock. The last time I was taken around on such a guided trip was in 1935, on my way by sea to join my University in England. (Gibraltar was then a routine port of call for P&O steamers playing between England and India.)

On that occasion I was shown the hand-hacked tunnelling high up inside the Rock - the gun positions, musket brackets and other defensive works that the British had built during the long siege of Gibraltar in the 1780s and 90s. But if that undertaking had seemed a remarkable achievement, what the visitor sees today seems little short of a miracle of military endeavour, especially when one considers the meagre resources of this tiny Colony on the southern fringe of Europe.

The later "fortification", built during 1940 and 1941--at the ground level this time - necessitated the laying out of a mini-city inside the bowels of the Rock, by blasting through the sheer mass of stone - a latter-day Ellora feat no less. Fortification, gun positions and living accommodation for a whole community of military and civilian defenders, together with all the logistical and administrative requirements for a protracted siege, were blasted through the granite womb of Gibraltar - a whole city built inside a massive mountain of stone, with its own road network - 32 miles of it, more than the total road system in the whole Colony! - telephone systems, water distilleries, vast stores

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of tinned and dried foods, hospitals, oil and service stations, barracks, clubs and canteens, games facilities - all that a city under indefinite siege would need.

It was when I expressed my astonishment at this extravagant undertaking, seemingly a monumental over-insurance, that I was set right about a part of neglected history of the Second World War.

One of the most severe crises that faced Mr Churchill's War Cabinet during the Second World War has received little attention from military historians. Few students of warfare today are aware that the most acute threat to the security of the British Empire during the early days of the War arose not so much from the Fall of France or from the threat of "Operation Sealion" - the invasion of Britain - but from the German plan to capture Gibraltar with the collusion of General Franco and the (Vichy) French.

The occupation of the British Isles by the Nazis would have been a great strategic and psychological blow to the British people no doubt, but it would not necessarily have led to a decisive defeat. In the event of a German invasion, the British Government had planned to move to Canada; and from there, with the industrial resources of South Africa, Australia and New Zealand, the material and manpower resources of the Empire, and help from America, Mr Churchill planned to conduct a prolonged imperial war against Hitler's Germany. Occupation of Britain would not have signalled the end of the War.

Gibraltar was another matter. Between the fall of France and *Operation Torch*, the Anglo-American landings in North Africa, the defences of Gibraltar came to be regarded as Priority One.

For over a hundred years the two focal points of British imperial strategy were the Middle East and Singapore - in that order of importance. In 1940 there was no threat to the latter. (In any case, the purblind assessment of the pre-war British Government about "Fortress Singapore" was that it was an impregnable bastion of the Empire, staunchly secure against a possible attack by Japan or any other eastern power). The Far East then caused no great anxiety.

In contrast the Middle East was crucial to the security of the Empire, not only because of its oil (which in those days was virtually a monopoly of the British) but also because through it and the Suez Canal passed the imperial life-line, Britain's maritime link with India, Australia and the West Pacific. Fortunately, the Mediterranean had been virtually a British preserve since Nelson's days. In 1940 the Italian Navy was in no position to challenge it; and

the main fleet of Vichy France was safely tucked away at Dakar on the Atlantic seaboard. Gibraltar prevented all enemy ships - surface or sub-surface - from entering the Mediterranean from the Atlantic. (And it continued to do so throughout the six years of war.)

It would be a different matter altogether if Gibraltar were to be captured by the Germans : and that is just what Hitler planned and issued a directive for - "Operation Felix" - in the autumn of 1940. It was obvious to him that without Gibraltar, imperial war strategy would collapse like the proverbial house of cards.

The R.A.F.'s glorious success in the Battle of Britain and the Royal Navy's supremacy in the Atlantic made Hitler realise that an effective invasion of the British Isles was not possible in the circumstances. At the same time, the surprise British bombardment of the French fleet in Oran on July 3, convinced him that the capture of Gibraltar must be his first and main aim. Once the Straits of Gibraltar was opened up for the German Navy, the realisation of the Fascist dream of *Mare Nostrum* would gain them command of the Mediterranean; and that would make possible a successful German-Italian overland drive along the North African coast ending with the capture of Egypt, the Suez Canal and, finally, Palestine - thus effectively driving British forces out of the Middle East and severing their direct link with India and Australia.

In Spain, Franco and his Generals not only hoped for but had blind faith in a German victory; and they were impatient to retake the Rock after nearly 300 years of British occupation. As Churchill wrote in *Their Finest Hour* : "We had been neutral in the sanguinary Spanish Civil War. General Franco owed little or nothing to us, but much - perhaps life itself - to the Axis Powers. Hitler and Mussolini had come to his aid."

On June 12th, two days after Mussolini formally joined Hitler and declared war against England, Franco had made a significant gesture; he changed Spain's status from "neutralist" to "non-belligerent".

On June 27th German forces reached the Spanish frontier in strength; and Hitler made his first overture to Franco. In Churchill's view an attack on Gibraltar so soon after Dunkirk would have dealt Britain "a destructive blow". He appointed his eminent Cabinet colleague Sir Samuel Hoare ambassador to Spain with a special mission : "Keep Spain out of the War."

Although Franco was greatly beholden to Hitler for his help during his civil war and, as a Fascist, wished for an Axis victory, he was, nevertheless, unwilling to allow German forces to operate through Spanish territory. Further-

more, though he was desperate to wrest Gibraltar back from the British, national pride demanded that the job must be done by Spanish forces without outside intervention. Any military help Hitler wanted to give in Morocco - for territorial gains at the expense of the French - would not require German forces to enter Spain. Furthermore, he wished to play safe; he would not join the Axis powers till Great Britain had actually been defeated. He was aware that Britain kept a 5,000-strong force at two days' notice to mount an expedition to capture the Canary Islands should Franco throw in his lot with the Axis powers.

At the end of June, a few days after his forces had reached the Spanish frontier, Hitler sent his *Abwehr* Chief, Admiral Canaris, to Madrid with a reconnaissance party of senior officers who had played a leading role in the paradrop capture of the Belgium Fort at the Eben Emael. Their task was to study the defences of the terrain to the north of Gibraltar with a view to drawing up a plan for its capture.

The result of their recce presented German planners with several problems, not the least of which was the difficulty German troops would have in launching an assault across the narrow isthmus connecting the Spanish town of La Linea and the heavily mined and defended British positions on the northern slopes of the Rock. Logistics also posed problems. The Spanish railway system was primitive - beyond the comprehension of the German General Staff! Not only was the rail gauge different from that of the French railways - thus necessitating the trans-shipment of troops, weapons and stores at the Spanish frontier- but *all* lines converged and moved through the bottleneck of Madrid, precluding speed, secrecy and surprise. Furthermore, the Spaniards could provide little in the way of rail or road maintenance, ordnance repairs, signal communications or foodstuffs.

Despite these difficulties Canaris reported that even without surprise, success would be ensured if certain conditions were met :

- (a) A minimum force of two German assault brigades, including a mountain brigade, plus the units that were deployed at Eben Emael.

This force would have to be supported by the following: at least twelve regiments of artillery including a regiment of heavy anti-aircraft 88 mms for bunker - busting roles; three combat engineer battalions; a special company of anti-mine warfare experts; and a tunnelling company.

- (b) Permission to transport the force through Spanish territory with the Spanish railway system handed over to German supervision.

- (c) Assault boats to convey at least one battalion from La Linea to land at the base of the Rock on the western side, in the dock area.
- (d) Heavy bombardment of the fortress and harbour, to destroy or drive the British fleet out of the Bay.

By mid-August Hitler had approved all the resources demanded. He then set about persuading Franco to agree to condition (b).

On September 6th he allotted the attack on the Rock the priority category of "Special Emphasis".

Meanwhile in Britain, the Cabinet became convinced that sooner or later the Germans would try to launch an attack on Gibraltar across Spanish territory. There were more than 80,000 German nationals living in Spain, some of whom were certain to have been stationed there to facilitate just such an operation. Churchill decided to move the main defences of Gibraltar into the bowels of the Rock - by blasting and tunnelling through the sheer stone to create a whole city inside. He sent an engineer brigade and a tunnelling company, plus an infantry brigade as a labour-cum-defence force - even though Britain was already drastically denuded and "disarmed". To ease the food situation Churchill decided on the compulsory evacuation of Gibraltarians - women, children and non-essential men - and all Service families. The Governor was given special powers compulsorily to carry out the evacuations. By the middle of 1941 nearly 12,000 of the population of about 29,000 had been sent away - to Spanish and French Morocco, Ireland, England and elsewhere.

German Air raids on Gibraltar began as early as on 18th July 1940 - three weeks after France capitulated to the Germans. Other raids followed in the same month but fierce anti-aircraft fire turned most of the attackers away, so that material damage was minimal. On September 24 and 25, the first heavy raids (by Vichy French bombers, it was believed) caused a little more concern but, even then, most of the 500 bombs fell into sea. In 1941 action shifted from the air to sub-surface sea attacks : manned Italian torpedoes operating from Algeiras (across the Bay of Gibraltar) succeeded in sinking two ships in the harbour and damaging some others.

Meanwhile, on the political front Hitler was disappointed that his attempts to obtain Franco's approval to an attack through Spain were not meeting with success. The earliest attempt to persuade him were made by Admiral Canaris soon after he had completed his reconnaissance. When he failed to get a decision, Hitler sent the famous air ace of World War I, von Richtoffen, by then a General commanding an Air Corps, who had played a

prominent part in providing dive-bomber and other air support to Franco's forces during the Spanish Civil War. But even he failed to stir the Caudillo into a favourable decision. The only encouraging development was that Franco replaced his pro-British Foreign Minister, Colonel Beigbeder, by the pro-German Senor Serrano Suner, his own brother-in-law. (Suner had already visited the German Foreign Minister von Ribbentrop to negotiate for military aid in case of a British landing on Spanish territory - in the Canaries or even on mainland Spain).

When by the beginning of October Franco still had not agreed to the passage of German forces through Spain, Hitler - in a move that was uncharacteristic of him - decided to meet Franco personally; but before that, on 4th October, he arranged a meeting with Mussolini at the Brenner Pass to enlist the latter's help in trying to move the Spanish dictator from his intransigence. When that also failed, Hitler decided to travel to the Spanish-French border and meet the Spanish dictator on board a train somewhere west of Marseilles. The German interpreter at the meeting, Dr Paul Schmidt, later wrote that Hitler offered Gibraltar to Spain on a plate, as well as some vaguely defined territories in North Africa; but Franco kept maintaining an evasive stance about allowing German troops to enter Spain. (He is reported to have taken a dislike to Hitler at this, their first meeting). More specifically, like most of his countrymen at the time, Franco, still reeling under the self-inflicted mutilations of the Civil War, did not wish to have foreign troops marching about and lording it over them and their country.

Hitler wanted to take over the management of road and rail communication systems through Spain immediately, in order to carry out improvements. He assured Franco that the annihilation of the British would be completed in the very near future, so the Canaries need cause no worry. The time had come for Spain to join the axis, he urged, but when Franco sought assurance that he would be allowed to occupy French Morocco, Hitler became evasive. Senor Suner's view was that Franco's continuing "No" to entering the war was a consequence mainly of the lack of guarantee on Morocco.

Hitler had everything - the men, the armament and the power - to march through Spain without Franco's permission; yet, strangely, he persisted - against the urging of his generals - in not violating a fellow-Fascist's wishes. In an unlikely reversal of roles, it was the *Fuhrer* who held back from a campaign of conquest while his military subordinates clamoured for offensive action.

However, preparations for the offensive continued apace. On November 12, 1940 Hitler issued his War Directive No 18 for *Operation Felix*, the capture of Gibraltar; and he held a briefing session for the operation on 5th

December at which were present the Army C-in-C, Field Marshal Brauchitsch; head of the O.K.W. (German High Command) Field Marshal Keitel; the C.G.S., General Halder; and the D.M.O. in O.K.W., General Jodl. The main points decided :

| | | |
|---|---|--|
| Commander of the entire Operation | : | Field Marshal Walter von Reichenau, Commander 6th Army |
| Commander of the invasion forces | : | General Hubert Lanz; |
| Commander of the Artillery forces | : | General Fritz Brand; |
| Commander of the Engineer forces | : | General Hans Mikosh. |
| Forces made available for the operation | : | 65,000 men, 1100 horses; over 190 artillery pieces; and 13,000 tons of ammunition. |

This force, almost the size of an army corps, was considered sufficient to take Gibraltar without any help from Spain. It would be marshalled in Assembly Areas in France, some distance from the Spanish border. In addition, Hitler ordered a special force to be formed to go to Franco's help should the British attempt a "counter-invasion" on a part of Spain's Atlantic coast.

The main attack across the isthmus south of La Linea would be preceded by a 24-hour pounding during which 6,000 shells would be fired at the ground-level defences and 14,000 at the gun emplacements on the Rock, each such position to receive 100 shells. Von Richtofen's aircraft would strike at the British fleet in the bay - and other targets - also on D minus 1. It was estimated that once the assault force crossed the isthmus joining the Gibraltar to the Spanish mainland, no more than about 20 of the guns on the Rock could be depressed sufficiently to target the assaulting troops.

The Germans estimated that Gibraltar's defences could not hold out for more than four weeks. Thus, if the invasion was to begin in early February, as the General Staff planned, the forces employed for *Op Felix* could be released for use elsewhere by Mid-May at the latest. It all depended on Hitler's signature on the document.

Hitler, however, still insisted on obtaining Franco's prior approval. He wrote to the Caudillo, stating that he intended the preliminaries to the operation - troop movements in France - to be set in motion on January 10, 1941, and the final assault to be launched on February 4 or 5. He said that Field

Marshal von Reichenau would himself lead the attack. Would Franco now please sign on the dotted line and formally declare himself a belligerent on the Axis side?

At a meeting organised by Hitler and attended by Serrano, the Germans tried to rush the pace by asking the latter to fix the date for Spain's entry into the war because, they said, it was "absolutely necessary to capture Gibraltar". Serrano however kept taking Franco's line by insisting that Spanish territorial demands in North Africa be approved, something that Hitler was reluctant to put down on paper because that might drive the Free French in North Africa into Britain's arms. So the stalemate dragged on to the end of the year.

In the meantime, General Ludwig Kuebler, Commander XL Corps, was ~~made~~ responsible for the training of the assault troops. He set up a most ~~elaborate~~ organisation in the French Jura mountains. On a mountain feature somewhat similar to the Rock of Gibraltar, he had extensive defences constructed - such as embrasures and galleries similar to those at Gibraltar. The legendary wind conditions around the higher slopes of the Rock were simulated by special wind machines to add realism to practice exercises as well as to assist pin-point accuracy in artillery targetting. Smoke-producing units also played a leading role in these exercises, because the laying down of smoke screens was imperative to obstruct the vision of the strongly emplaced defending forces inside the Rock.

Interestingly, the position in London during November-December 1940 was that British Intelligence had somehow correctly surmised that there was by then little danger of an immediate German attack on Spain. In the circumstances, the Cabinet decided to bolster Franco's determination to resist invasion by sending him generous supplies and a credit offer to encourage him to maintain his stance of non-belligerency and to organise Spanish guerrilla resistance in case Hitler went ahead with *Op Felix* despite Franco's veto. Mr Churchill was also able to persuade President Roosevelt to pitch in with American food aid on a monthly basis.

Thus was Franco further emboldened to resist German attempts to extract a precise date from him for Spain's entry into the war. On December 31, Hitler told Mussolini that though he would have to postpone the operation but would keep *Op Felix* on the anvil, German plans for entering Spain in January and the attack on Gibraltar in February would, for the time being, be held in abeyance.

Hitler did revive *Op Felix* in March, but because of his plan to invade Russia in June, he put off the date of attack to October 1941 - obviously

expecting to lay low the Red Army within of few months. The new operation was code-named *Op Felix-Heinrich* - an attack to be undertaken, if necessary, without Franco's consent. The Russian campaign, however, did not go well; and plans for Gibraltar remained in limbo. Fortunately for the Allies the attack never came; and by November 1942 it was too late. Anglo-American landings in North Africa, *Operation Torch*, forestalled the German dream and when General Eisenhower installed his HQ in Gibraltar, *Felix* died a natural death.

Hitler's generals never ceased to regret his reluctance to attack Gibraltar against Franco's wishes. Speaking to British diplomat Sir Ivone Kirkpatrick in Nuremberg prison at the time of his trial as a war criminal, Herman Goering said that Germany should have resolved, immediately after the Fall of France, to march through Spain with or without Franco's consent, capture Gibraltar and spill over into North Africa - as a preliminary to the conquest of Egypt. Even Hitler, in 1945, admitted that not attacking Gibraltar in the summer of 1940 was a great strategic mistake.

The whole course of the war, and perhaps its outcome, would have changed had Gibraltar, the Mediterranean and North Africa come under German control in early 1941. But they didn't; and so, at the end of the war, the saga of the Rock's defences and its strategic potential were downgraded in importance and consigned to some obscure muniment.

NOTE TO CONTRIBUTORS

Articles on National Security issues and Defence and Security forces, for publication in the USI Journal, may be sent to the Editor in duplicate, typed in double spacing. Subjects should be covered in depth with adequate research and reference made to sources from where information has been obtained. The length of articles should be between 3,000 to 4,000 words.

Articles may not be returned unless accompanied by self-addressed and stamped envelope.

Letters to the Editor

Letters are invited on subjects which have been dealt in the Journal, or which are of general interest to the services.

I

Dear Sir,

REQUIREMENT FOR A MILITARY ARCHIVES

A measure with long term implications is to establish a Military Archives to commemorate the forthcoming celebrations of a half-century of Independent India. This would be a repository of the contribution of the Armed Forces in the enterprise undertaken in the last 50 years -- that of nation-state building.

Within two months of independence, the Armed Forces were called upon to fulfil their role in defending the country in Kashmir. It has been a continuous operational engagement in varied theatres ever since. Four wars, numerous internal security engagements, peace-keeping under UN auspices, standing sentinel from Siachen to Andamans, aid to civil authority in natural and manmade calamities and regional missions have all been professionally dealt with over the years. Their unique apolitical character has been the model for the Third World.

The immense variety of these tasks, the resource constraints, the compulsions of self-reliance and a sensitive geopolitical environment have added to the challenge. The mastering of equipment constantly upgraded, evolution of doctrine, facilitation of joint operations and facilitation of civil-military understanding in sensitive situations indicate the dynamic quality of response of the forces during these years. There is, therefore, a wealth of experience that the succeeding generations have accumulated.

The pioneers who raised the Indian officer cadre have departed. Those who inherited the Brindian traditions are fast fading away. Those who stamped the Indian ethos on its forces are now retirees. The next generation is now positioning the Indian military to tackle the demands of the coming century. All this indicates, there is a heritage waiting to be captured for posterity. These memoirs, diaries, tomes of anecdotal and episode specific material, photographic record of legendary men, times and places require a collective desti-

nation. The collection and preservation of professional papers of military men must be in a national military archives.

The co-location of this centre with the DSSC, in acknowledgement of its tri-service character, is most appropriate. There it will serve to inspire student officers of every service and arm. The historical record, available at first hand, would help provide a uniquely Indian perspective to the curriculum. Alternatively, it could be located at the cradle of Indian military leadership, the NDA. If it is to be Delhi based, then advantage of access for academics and the public accrue. It would also remain in the national focus. The USI could act as a custodian. The funding can be partially from service budgets, government grants, officer contributions, public donations and private sector endowments.

These repositories of military heritage are maintained in nations with as rich a military tradition as ours. In the UK there is the Liddell Hart Archives at the King's College London. There are some papers donated by officers and their families also at the Churchill Archives at the University of Cambridge.

It would be appropriate to launch the initiative now so that it fructifies by the time of the fiftieth anniversary. It would help highlight the important role of the Indian military in preserving the freedom won. It would help preserve the record of contributions that the past generations made in nurturing the Indian Armed Forces so that it outlasts this century. It is a tribute we owe them. It is a project whose value will only be evident mid-next century when as a Great Power India celebrates its centenary.

Yours sincerely

Churchill College
Cambridge CB3 0DS
United Kingdom

Captain Ali Ahmed

Review Article 1

Defence Procurement in Pentagon

AIR MARSHAL HK OBERAI PVSM, AVSM, VM (RETD)

The title of this book does not lend itself to easy reconciliation with its contents. In place of the fierce skirmishes it promises, the first half of the book is no more than a single man's self stated tirade against the system of development, testing and procurement of armaments and systems followed by the Pentagon. The author finds many aberrations in the system and in the process names many names both high and low in the procurement hierarchy of the US Defence Department and Pentagon. Unfortunately, those accused of betrayal or worse have not been given a chance to defend themselves. A true picture can emerge only if their side of the story as told by them is available. Notwithstanding this lacuna, the second part of the book does raise some fundamental issues relating to long term projections and development and testing of weapon systems. The first and foremost of course is the very preparation of Op/Air staff requirements. There is a tendency to inflate them in order to cater for impending or expected technological or scientific breakthroughs without really considering the actual tactical and operational requirements. Then there is the endemic question : should technology simplify systems, where as the experience is that it makes them more complex? While fire power and accuracy improve, complexity usually leads to unreliability. In addition, procurement, maintenance and training costs soar and budgeting and force planning become a casualty.

The author lays great emphasis on true to life testing of the weapon systems before induction. He believes that simulation by computer runs for this purpose is inadequate. In fact, it can be misleading. Actual conditions must be created to test the claimed performance and efficacy of safety systems. Burton gives the example of testing of "Bradley Fighting Vehicle" in which he was involved personally. He claims that vested interests both within and without the service resisted his attempts to test the vehicle by creating actual battle conditions. Though eventually he succeeded, but in the process earned the wrath of many and had to seek pre-mature retirement.

Whilst one is in agreement with the basic points raised in the book regarding development of new weapons and systems yet the supporting examples appear far from convincing. For instance, the author prefers the A-10 to

The Pentagon Wars : Reformers Challenge the Old Guard. By James G. Burton, Annapolis, Naval Institute 1993, p. 306, \$ 23.95, ISBN 1-55750-081-9.

Air Marshal H.K. Oberai is a former Air Officer Commanding-in-Chief of an Operational Command and a Principal Staff Office at Air Headquarters.

F-16 for close support since it achieved considerable success in the "Gulf Conflict". What is forgotten is that the A-10 is much slower and will be highly vulnerable against a well matched enemy. The F-16 is preferred over the F-15 for air defence, since the F-15's performance in the Gulf War as per the author was lacklustre. In fact, little or no role is seen for it in a future conflict. This is over-simplification. The roles of the two aircraft are complementary. The F-15 is an air superiority fighter with a longer and wider sweep for engagements beyond visual range whereas the F-16 is more suitable for close combat. There are other controversial examples as well.

The book contains a few chapters about the demand that emerged for reforms in the operational doctrine of the American Army after the failure in Vietnam. The most out-spoken critic of the doctrine was Col John Boyd and the author considers his work "A discourse on Winning and Losing" even superior to the works of Clausewitz, Jomini and Sun Tzu. While the moral and mental aspects of war highlighted by Boyd are appreciated, yet most of the other discourses are no more than refinements of the standard "Principles of War". Feints, deception, multiple thrusts, manoeuvre behind enemy lines as advised by him in place of the attrition philosophy where fire power is king as followed by the US Army, are all a part of the old treatises. What is crucial is choosing the strategy that matches with the prevailing situation. But in Vietnam, even the most refined military doctrine would have failed. The GI was made to fight somebody else's war. He had no interest in it. A political solution based on popular will was the only answer.

Col Burton has spent many years in the corridors of pentagon and is well acquainted with its ways. Notwithstanding his mild proclivity for a favourable self appraisal, the book does manage to become thought provoking in the second half.

Review Article 2

The Art of Leadership

LT GENERAL S K SINHA PVSM (RETD)

An avid scholar of the art of leadership and a successful practitioner of that art, Lt Gen Dr M L Chibber, an eminent and highly respected General of the Indian Army, has written an excellent book on leadership. It is a synthesis of theory and practice based on the author's deep study and wide experience, sublimated by inspiration and guidance from His Holiness Bhagwan Sri Sathya Sai Baba.

Adam Smith placed self-interest on a high pedestal, making it into the guiding light of economic activity. Soon it also became the sole motivating force for social and political activities in a highly materialistic world. This has been the root cause of the degeneration in values that has overtaken mankind in modern times. Toynbee, referring to the deep rooted sickness of modern society states, "it can be cured only by a spiritual revolution in the hearts and minds of human beings." Drawing heavily from Indian philosophy and ancient traditions, General Chibber brings out that "Tyag" (sacrifice: selflessness) is the bedrock of good leadership. This is also in consonance with what the Chinese thinker, Lao Tzu, who taught 2000 years ago, that "true self-interest (of a leader) teaches selflessness."

Dissecting the qualities of leadership in a simple and convincing manner, the author has laid great emphasis on the spiritual content of leadership. He maintains that 90 per cent of good leadership is character. Knowledge, courage, will-power and initiative together, constitute the remaining 10 per cent. The Mahavakya (the great utterance) on leadership articulates the qualities of leadership as To Be, To Do, To See and To Tell. To Be is the aggregate of the qualities of a leader. To Do reflects the personal example set by the leader. To See implies awareness of prevailing conditions contributing to realistic formulations. To Tell represents the communication established by the leader with his people, showing the latter the path to follow.

Starting with Bhishma's advice on leadership given on the battlefield of Kurukshetra, 5,000 years ago, this book contains interesting anecdotes from

Sai Baba's Mahavakya on Leadership : Book for youth, Parents and Teachers. By Padma Bhushan Lt Gen (Retd) Dr M.L. Chibber, Prasanthi Nilayam, Sri Sathya Sai Books & Pub Trust, 1996, p. 194, Rs 35.50, ISBN 81-7208-180-4.

Lt General S.K. Sinha is a former Vice Chief of the Army Staff, Indian Army and a former Indian Ambassador to Nepal. He is a well-known author and military thinker and a frequent writer on national security issues.

the lives of great men from different parts of the world. These provide a rich panorama of the qualities of a leader. The vital importance of the leader setting a personal example has been emphasised repeatedly. This applies to leaders in all walks of life. In the first half of this century, India was blessed with a galaxy of great leaders in all fields of human endeavour - politics, spiritualism, literature, history, industry and science. Today the quality of leadership in our country, has hit the nadir, particularly in the field of politics. Leaders talking big but setting a poor example themselves, can never inspire confidence. The adage, example is better than precept, applies more to the present Indian scenario, than ever before. In this context, an exposition on leadership with spiritual overtones, has great relevance.

This book includes an outline of the lives of three great leaders of diverse background and diverse achievements - Benjamin Franklin, Mahatma Gandhi and Winston Churchill. These thumb-nail sketches provide a glimpse of what made these leaders great. The youth can learn lessons from their lives and also draw inspiration from them. The concluding chapter of the book has some practical advice for parents and teachers, on whom rests the responsibility for rearing the leaders of tomorrow.

A highly readable and very instructive book of great practical value, Mahavakya on Leadership, draws strength from spiritualism of the secular kind without getting lost in religiosity. The foreword and afterword by Sri Sathya Sai Baba adds lustre to this classic effort which is so supremely relevant to our times, and to Indian conditions. The concluding sentence of the book opens an exciting vista for aspirants of leadership, "To lead and to lead well, is the most challenging, exciting and joyous role a man can play. This is verily within reach of everyone who dares to soar higher than mere selfishness."

Considering present day soaring prices, the publishers have done a remarkable job in keeping the price of this well produced book, so low. It costs only Rs 35. This places it within easy reach of individuals. The wide dissemination of the ideas contained in this book based on India's ancient wisdom, can contribute towards moral resurgence which is the crying need of our modern society.

A CORRECTION

The book review on pages 542-43 of the Oct-Dec 95 issue under the title '**HOUSE OF CARDS : WHY ARMS CONTROL MUST FAIL by Colin S Gray**' may be deleted as the title of the book and the text of review are of two different books. The error is regretted.

—Editor

Short Reviews of Recent Books

A History of International Relations Theory : An Introduction. By Torbjørn L. Knutsen, Manchester, *Manchester University*, 1992, p. 298, ISBN 0-7190-3660-7.

Every introductory volume presupposes prior acquaintance of the reader with the subject. This genre deals with the scope of the subject, its overlap with other disciplines and gives a superficial overview of the main topical contents. It would be unwise to embark on the study of a subject with an introductory volume. The book under review is no exception.

However, it is quite the best book to read after gaining familiarity with the subject it covers-international relations. Though designed as a historical introduction, it can be best appreciated by those already immersed. Most such readers lack a theoretical understanding, as against working knowledge, of the subject. This book is ideal to bridge the gap.

It is fluent in both concepts and style. Unlike most theoretical works, it is purged of intellectual arrogance. Its economy of language and jargon and manageable length are excellent aids to comprehension.

-- Captain Ali Ahmed

The Penguin Encyclopedia of Weapons and Military Technology : Prehistory to the Present Day. By Kenneth Macksey, London, *Viking*, 1993, p. 392, £ 20.00, ISBN 0-670-84411-X.

A useful reference book, dealing with the interaction of technology and weapons - on the evolution of war-the role of scientists, inventors, industrialists, the innovative military philosophers and commanders. These developments have been placed in a time frame, a difficult proposition. The subject is vast. In the Chronology, year 1698 against Military Academy, should have been 1741, unless the author had some thing else in mind?

There are several pieces of useful information, which could be applied to our conditions such as :-

In 1813, Congreve developed Hyder Ali's incendiary rockets to fire 42 pound warheads; 2,000 yards.

Falkland operations were launched in a week because of computerised logistic system, for loading of men and materials.

Laser is also being used by Britain for realistic training.

Unmanned under water vehicles (UUV'S), are in use since 1958, for antisubmarine applications.

There are also some errors, like on page 56 - Pearl Harbour, the name of the two capital ships sunk off Malaya were, Prince of Wales and Repulse. Not Duke of York. They had arrived on the 2nd Dec, and were not normally based in Singapore.

The author has been very unfair on Sir Basil Liddell Hart. He was not discredited during WWII! It is a pity that the Duke of Wellington has not been mentioned in reference to Waterloo! His reference to the 15,000 Indian army personnel at Kut as diseased men before the siege is also incorrect.

— Maj Gen Partap Narain (Retd)

International Futures : Choices in the Creation of a New World Order. By Barry B. Gughes, *Colorado, Westview, 1993, p. 206, \$ 49.95, ISBN 0-8133-1650-2.*

The most thought provoking book, on the choices in the creation of a New World Order, that I have read so far. It approaches the problem, of thinking of the future; both by the traditional text and computer simulation. It is a serious eye opener as it attacks the thinking of the international future on basis of IFs.

Chapter Three goes into the computer model and the seven major parameters, namely population, food availability, energy, environment, technical change, economic restructuring, and social and political change.

For those interested in running the IFs 90 — IBM Disk, it can be run as a model for 46 years, 1990-2035. The book does not make predictions about the future, one must make ones own judgements, based on the stucture and parameters of IFs.

A serious study, it is highly recommended, the book is well worth the price.

-- Maj Gen Partap Narain (Retd)

True Faith and Allegiance : The Burden of Military Ethics. By James H. Toner, *Lexington, The Univ Press of Kentucky, 1995, p. 202, \$ 25.00, ISBN 0-8131-1881-6.*

This book deals with military ethics and importance of character in individuals in military and national life. It brings out that Officers and Soldiers not morally competent are not militarily competent. Good people may not always be good soldiers but good soldiers will always be good people. Military service is a well from where our ethically beleaguered society may draw moral refreshment. Military ethics is a part of moral philosophy. It takes us to snowy heights of honour.

It is an apparent paradox that lack of ethics may be tolerable in a country but that 'ethical incongruities forecast doom for a military establishment'. The author time and again emphasizes that the American Eagle is bereft of character and ethics and makes a spirited clarion call for its rejuvenation.

A philosophical treatise backed by case studies which must be read, digested, analysed, understood and thereafter applied by all senior officers of the Defence Services.

-- Maj Gen J N Goel (Retd)

Case Studies in the Development of Close Air Support, ed by Benjamin Franklin Cooling, *Washington DC, Office of Air Force History, 1990, p. 606, ISBN 0-912799-64-1.*

After the development of aeroplane, air power emerged as one of the prime instruments for waging war. A plethora of literature is available on various facets of air power like strategic bombing, air defence and reconnaissance but, the emergence of close air support (CAS) as an incisive military tool has not found adequate deliberation despite the fact that during World War-II, over 20 per cent of air effort was devoted to this instantly telling and effective means of intervention right along the battle lines. "Case Studies in the Development of CAS" endeavours to fill this gap. The end result is informative and educative. The opening chapter "Developments to 1939" begins with the first use of aircraft for tactical purposes in the Italy-Turkish war of 1911-1912 in Libya wherein an Italian pilot dropped three small bombs on Turkish positions. It ends with a retrospect which lucidly brings out the importance of CAS vis-a-vis the other roles. It has been highlighted that while strategic bombing seeks to influence war by massive blows against the enemy's infra-structure, tactical air power including CAS, effectively influences the ongoing battle. The subsequent chapters cover the history of CAS in World War-II, Korea, Vietnam and that of the Israeli - Arab conflicts. Amongst these, the Israeli experience can be considered as the piece de-resistance of the book. It is admitted by the Israelis that during the 1973 conflict as also in the earlier campaigns, "even at the highest levels, the command and control system did not always work presumably due to technical glitches in communication, or through some genuine misunderstanding between the two staffs or perhaps because the Air Staff sometimes chose to turn a deaf ear". We have heard such stories after 1965 and 1971 conflicts with Pakistan. The Israelis consider intelligence and air superiority a pre-requisite for successful CAS. They insist that you must know in real time where the target is and how long it will be there. They appear to have solved this problem by RPVs and other methods of airborne surveillance. During the Yom Kippur War in 1973, they lost over 40 aeroplanes engaged in CAS, in the first 2/3 days to ground fire including SAMs. This was crippling their Air Force and they quickly realised, that now, there were two kinds of air superiority; one at low and medium altitudes and the other at medium and high altitudes. While they were the masters at high altitudes they had little or no control at lower levels. It is only when they wrested control at lower levels as well that they could launch meaningful and sustainable CAS. The IAF may give this a thought. The battlefield is likely to be dense with AA weapons and appropriate tactics need to be developed. Alongside, it is also for consideration whether interdiction would pay better dividends. Even in Israel some experts now believe that "provided that air superiority can be attained then the preferred employment of tactical air resources is in interdiction". Together with the Army Staff we need to ponder over this proposition.

The book is excellent reading material for air strike planners and students at institutions like the DSSC and College of Air Warfare.

-- Air Marshal H K Oberai, PVSM, AVSM, VM (Retd)

The Diffusion of Advanced Weaponry : Technologies, Regional Implications, and Responses. Ed by W. Thomas Wander and Others, *Washington, American Association for the Advancement of Science, 1994, p. 391, \$ 20.00, ISBN 8-87168-529-9.*

After the Cold War period there has been a concern all over the world regarding the proliferation of nuclear weapons, besides chemical and biological weapons. The delivery system of the weapons like ballistic missiles and jet aircraft also caused concern to the peace-loving nations.

The focus of the authors in the book goes beyond weapons of mass destruction and ballistic missiles. The technologies of the concern have been - weapons delivery systems, and associated technologies, for example, command and control. The authors consider how much technology interacts with culture, military doctrine, and threat perception with particular reference to the Middle East, South Asia, and Northeast Asia. They examine how technology interacts with the dynamics of regional security and the impact of that interaction.

— Col P K Vasudeva (Retd)

Essays on Strategy XII. Ed by John N. Petrie, *Washington, DC National Defense University, 1994, p. 415.*

'Essays on Strategy' written by noted authors specialised in their field comes as a useful collection highlighting the priorities and options for USA and others in general towards maintaining the military and economic influence in the Post Cold War era. The unipolar world equation that came into being besides giving strategic initiative has brought in additional responsibilities and commitments to US to ensure that existing political and economic status is not disturbed.

In the prevailing global equation trade, economy and social considerations such as - public support for military operations, interventions and even for the peace keeping mission have become major strategic interests and would continue guiding the nations in future. Considerations of measures for war termination during the planning stage is altogether a new chapter in the operational strategy; this will ensure that the confrontations if resorted to are not unduly prolonged and the attritions are contained at a manageable level. This also indicates shift in our thinking of avoiding armed conflicts. Role of satellite media (CNN TV) as witnessed during the Gulf War adds a new facet in the strategic planning. Seeing its effects during the said war, the author is justified in terming it a new Principle of War.

Of late, age old concept of peace keeping has been decimated by frequent requisitions and type of conflicts that are being witnessed, one needs to plan and prepare for Peace Enforcement than Peace Keeping.

The Editor - Capt John N Petrie, who has distinguished in research work has meticulously gone in for selection of articles and the lay out has succeeded in maintaining the continuity, interest and urge the readers to 'Know More'.

— Col Ramesh Davesar

International Relations Theory Today. Ed by Ken Booth and Steve Smith, *Cambridge, Polity, 1995, p. 367, £ 12.95, ISBN 0-7456-1166-4.*

International relations and its ramifications have always been the prime interest of academicians and the professionals. Recent changes in the regional and global equations are likely to affect this theory and its applications.

This book with the basic theme of 'International Theory' contains articles written by prominent theorists, deals with the effects of changing circumstances on the international relations and politics. It also discusses the interse importance of this theory with the live variables that have emanated from the socio-economic and political changes across the globe such as post cold war scenario, role of world community, relook on security aspects and the importance and role of maintaining individual and collective identity at the community and the international levels.

The collection edited by Ken Booth and Steve Smith both professors of international politics, presents altogether a different but interesting format giving intellectual and theorist account of international theory and its validity under the changed environments.

— Colonel Ramesh Davesar

A History of the World in the Twentieth Century. By J.A.S. Grenville, *Cambridge Harvard Univ, 1994, p. 973, \$ 39.95, ISBN 0-674-39960-9.*

This book by the masterful international relations historian, Grenville, already finds primacy of place in the reading lists of most university courses as the single definitive history of this century. This millenium ends five years hence but its last century ended a decade earlier with the end of the Cold War. As a reference book to grace library shelves, both institutional and personal, there is no better one volume work. The comprehensive bibliographical reference can aid in filling up the shelves allocated for covering the epic struggles against imperialism, fascism and totalitarianism that dominated this epoch. The exceptional index aids manouvre between the personalities, locations, themes and times that figured in shaping the political history.

— Captain Ali Ahmed

Joint Training for Night Air Warfare. By Brian W McLean, Lt Col, USAF Alabama, *Air University Press, 1992, p. 103.*

The author has dealt with the Joint training for night warfare of American Forces on a single service concept and adaptation by sister services in a joint form exploiting

the latest available technology resources. The four-chaptered book discussing the background of joint operations and night air operations-their current status including procedures, conducting training programmes and analysing their shortcomings and finally optimising effectively the available resources-equipment and aircrew in a phased manner.

The approach to the subject is refreshing and will be found useful by all students of Air Power.

— Air Comd SK Bhardwaj (Retd)

House of Cards : Why Arms Control must Fail. By Colin S. Gray, *Ithaca, Cornell Univ*, 1992, p. 242, \$ 32.95, ISBN 0-8014-2703-7.

"The Primary mission of Arms control is to prevent war:" this thesis examines the concepts of arms agreements in great detail, offering a vast array of fact, opinion, and analysis, to establish that the very basis of arms control is so ill founded, that these agreements never have, and never will, lead to International Security as planned by those having faith in their efficacy.

"War is a political phenomena": "the causes of war remain obscure and uncertain: "States do what they have to". The paradox is that "Arms Limitation works only between willing states where it is least needed". It does not "work to prevent war", does not "assist predictability", or reduce uncertainties", because "inconvenient restrictions" are just not implemented by States. The author draws on historical record and many sources of current fact and comment to establish how these agreements offer only illusory security, sold by "men in High Public Office, who are in the business of retaining hope." Arms control, imposed by a few countries on the rest, to prevent rogue behaviour, is only a hope: "great power prerogatives are no longer sustainable;" Saddam's Iraq, a signatory to the NPT, nevertheless went towards building nuclear weapons. "Countries do what they feel they must"; political will and moral courage are needed to deal with violations. On the plus side, "hydrogen bombs have removed profit even from great military success in war"; and 1985-95 is good news for arms limitation because "peace has broken out."

The author lightens this rather heavy and deadly subject with an ironic touch; sheer horse-sense backs his detailed and timely analysis, aimed against the excessive importance and effort directed towards arms limitation agreements in the USA and the WEST. It is an enlightening book for those involved in this subject.

— Tindi

The United States and the Middle East : A Search for New Perspectives. Ed by Hooshang Amirahmadi, *New York, State Univ of New York* 1993, p. 491, ISBN 0-7914-1226-1.

This book is a compilation of essays by thirteen eminent writers. It focuses on the US policy in the Middle East and carries out its critical analysis. It evaluates the various aspects of the Middle East scenario including Arab-Israeli conflict, the Pales-

tine question and the Gulf War. The issues discussed show their impact on the American policy, on the Islamic movement, Arab nationalism and the oil culture.

— Lt Col Daljit Singh (Retd)

Crosswinds : The Air Force's Setup in Vietnam. By Earl H. Tilford Jr, *College Station, Texas A & M Univ Press, 1993, p. 254, \$ 30.00, ISBN 0-89096-531-5.*

The war in Vietnam, fought and lost by the USAF, is undoubtedly the longest war in history. The United States lost and had to pull out of Vietnam. The book deals with the role that the United States Air Force (USAF) played in the course of this war. The author has gone into great lengths in researching the Air operations in Vietnam, indeed an indepth study. It is easy reading, absorbing, interesting and informative. The book takes you through the years of Air operations, including operations in Cambodia and Laos. It describes the massive Air Effort put in and one is left to wonder why the United States lost the war despite the unprecedented Air support, never equalled in history in terms of Air Support and Armament stores used. The author has concluded that the Air Force was responsible due to mis-employment of Air Power, lack of strategic planning within the constraints placed on the Air Force by political considerations and not having a real plan to meet the ground realities. He never admits that the hands of the Air Force Planners were tied and that it never had the freedom of action in attacking strategic targets in North Vietnam.

The Author is decidedly and very positively against the hierarchy of Strategic Air Command. The Generals incredibly lacked professionalism in not being able to run the Air Force all because they held a background of Strategic Air Command and were in control of the USAF including Training and Tactical Commands. His observation is that they were not capable of suggesting targets appropriate to achieve results and floundered in their planning. I certainly do not agree with the Author, for the Air Force was indeed operating with their hands tied. It is only the Air Effort that made it possible for the United States to hang onto Vietnam for so many years - otherwise they would have been kicked out much earlier.

— Group Captain D. Yadav, AVSM, VM (Retd)

Lightning Strikes : The 475th Fighter Group in the Pacific War, 1943-1945. By Ronald W. Yoshino, *Kansas, Sunflower Univ, 1992, p. 163, \$ 22.95, ISBN 0-89745-104-X.*

In this doctoral thesis, Dr. Ronald W. Yoshino has chronicled the history and achievements of the 475th Fighter Group - the Satan's Angels, right from its raising (14 May 43) on the foreign soil to its final journey home (31 Dec. 46). The comprising Squadrons 431st (hades) 432nd (Clover) and 433rd (Possum) spearheaded Douglas MacArthur's mission in the South West Pacific (South East Asia, Australasia and Oceania) starting from North East Australia and going upto Japan, with 547 kills in aerial combat against the loss of 87 Lightnings (34 only attributable to direct enemy action), thus achieving an enviable kill ratio of 16:1. The Satan's Angel's flew 3042 missions composed of 21701 individual sorties with their twin engined Lockheed's P-

38s mainly, P-39 & P-40, 86 per cent of which were offensive in nature. The beauty lay in the improvisations and innovations by the Lightning masters in effecting escort, bombing and strafing missions. The combat effectiveness (a function of elan & morale of the crew) of Satan's Angels can be gauged from the fact that the peace time 8 days engine changing job used to take only eight hours during operations.

The book contains some rare and useful photographs well mosaicked in the text. Some purposeful hints/conclusions can be drawn for crisis and crash training and selection of crew. It makes an interesting reading and is recommended to all those interested in aviation.

— Air Cmde SK Bhardwaj (Retd)

Flying Blind : The Politics of the US Strategic Bomber Program. By Michael E Brown, *Ithaca, Cornell University, 1992, p. 358, \$ 52.25, ISBN 0-8014-2285-X.*

Programmes for development of weapon systems seem to wander in unexpected ways, almost always with cost over-runs and below forecast performance. This study and analysis of the US Strategic Bomber programme could well illustrate projects anywhere. Founded on archives, the research shows how military assessments of emerging operational threats and strategy into the future are far from clear or final, leading to demands set well beyond the state of art. Speed is always pushed, raising costs, repeated changes in demands, cutting short or radically altering projects even after long design and development, sometimes ending in lowered performance and reduced numbers entering service. Modern weapons programmes are only too often a cost/performance disaster. Contrary to conventional wisdom and thinking, it is not some technical break-through and opportunity with industry which drives these projects, but rather bureaucratic forces which wield power over the military industrial complex.

The writer well succeeds in presenting a report of much interest to National Defence planners and students.

— Tindi

The Indian War of 1864. By Captain Eugene F. Ware, *Lincoln, Univ of Nebraska, 1994, p. 483, \$ 14.95, ISBN 0-8032-9749-1.*

To the extensive bibliography of literature about the American Civil War, The Indian War of 1864 makes a welcome addition, in fact a revival of the original publication of 1911. Built up on amusing anecdotes and gripping episodes, witnessed or collated from first hand reports by the author and his company of irregulars - Seventh Iowa Cavalry, Capt Ware had chronicled the mood, pressures and events of the War years into a picturesque panorama.

Deployed along the frontier posts for surveillance of the overland routes, and safeguard these from raids by resurgent Indian tribes, they were also concerned with the lesser known phenomenon of a massive migration of population across the fron-

tiers. The author vividly narrates the effervescent spirit - the adventure, the gamble and the risks which hounded the transient hordes with their wagon-trains spread out to a day-long trudge.

— Maj Gen S K Talwar (Retd)

High Seas : The Naval Passage to an Uncharted World, By Admiral William A. Owens, *Annapolis Naval Institute*, 1995, p. 184, \$ 27.95; ISBN 1-55750-661-2.

A book on Naval power, its potential and future structure to perform its singular as well as combinative roles, written by an outright professional, on the basis of his personal knowledge, experience, concepts and debates on the subject, has all the ingredients of readers delight. It has the genesis of change and review, data based analysis to work out the resource requirement, replenishment and replacement; the prospective plans, and procurements are both theoretically sound as well as worthy of pragmatic execution. It may have some inherent flaws of 'crystal gazing' but not easily discernible.

The real strength of the book lies in its new concepts propounded on the foundations of ruthless admission of omissions and commissions, failures and pitfalls of the erstwhile force experienced during the beginning of the last decade of the current century, in the wake of 'high tech' drama of the 'Desert Storm'. The changes envisaged were dictated by the 'doctrinal disaster for U.S. Navy' during this period and the consequent 'intellectual fermentation & debate'. Break-up of the erstwhile USSR, thereby creating a 'Vacuum' in the super power rivalry, deterrence and detente necessitate the organisational innovations, which the author has fished out before the 'intellectual turmoil' could ebb - thus leading to a status quo. 'Revolution of concept' has successfully converted rhetoric to reality.

— Air Vice Marshal SS Malhotra, AVSM, VM (Retd)

SOS : The Story Behind the Army Expedition to Borneo's Death Valley. By Lt Col Robert Neill and Major Ron Foster. *London. Century 1995*, p. 266, £ 16.99, ISBN 07126 75280.

This is the story of Lt. Col Robert Neill and Major Ron Foster who began their descent into the unmapped depth of Low's Gully in Borneo aptly described as death valley.

The party led by Neill got separated and their food supplies almost diminished. The communication also broke down. A stage came when Neill considering that they were destined to die, he along with the Chinese soldiers had written their last will.

The author describes the entire happenings in a dramatic manner, the human endurance under trying conditions and thereafter reaching civilisation after 18 days.

An interesting case of leadership which provides many lessons to the young

officers who would most of the time break down under similar difficult conditions.

A good addition to all libraries.

— Commodore RP Khanna, AVSM
Indian Navy (Retd)

A Foreign Policy in Transition : Moscow's Retreat from Central America and the Caribbean 1985-1992. By Jan S. Adams, *Durham, Duke Univ. 1992, p. 248, ISBN 0-8223-1293-X.*

The Marxist theory of class struggle between nations had been the basis of the Soviet Union's policy of global confrontation between capitalism/imperialism and socialism right till the end of the Stalinist era. In this configuration the USSR had always seen the United States of America and its Western allies as implacable imperialist enemies who had to be confronted at every stage. Flowing from this, was the USSR's ready support to peoples' revolution and wars of revolution in all countries dominated and exploited by the imperialist powers. A Foreign Policy in Transition succinctly traces out the changes that were brought about in the post-Stalinist period.

The author brings out how the various changes in the Soviet foreign policy affected the countries in Central America and in the Caribbean Basin. He shows how in the first of these changes the USA from being an inevitable enemy against whom any thought of reducing confrontation would be illusory, the Soviets graduated to a stage, during Khrushchev's time, of seeing it as a rival in an economic contest. Albeit a rivalry which offered rewards to both sides and which could best prosper if international tensions were kept to a minimum. Unfortunately, before any real results could be shown there was a recrudescence to the earlier Stalinist policy of confrontation during Brezhnev's rule.

Revolutionary changes in the Soviet mindset really came about with Mikhail Gorbachev's 'glasnost' and 'perestroika'. Jan Adams elaborates how from the earlier two stages of 'antagonism' and then 'competition', Gorbachev's liberal approach set the stage for a cooperative approach between the two super-powers in solving the long standing problems in Central America and the Caribbean. The author goes on to examine in some detail the effect that these changes of policy had on these countries. It is brought out how the Soviet client states in the region reacted to the new ideas proclaimed by Gorbachev according to their individual situation. For instance Castro's Cuba did not take kindly to the changes and remained antagonistic to the last in spite of all the pressure brought on it by the Soviets to bring it into line. On the other hand, the Sandanista regime in Nicaragua readily cooperated even though they were voted out of power in the resulting elections.

This book is a well researched work on the USSR and USA rivalry in the Caribbean and Central Americas in which the author analyses the effect the changes in Soviet policy has on each one of the twenty-two countries in the region. In conclusion he brings out how Gorbachev's policy of cooperation eventually resulted in an overall gain for the USSR and thereby also for its successor state the Russian Federation.

— Maj Gen SC Sinha, PVSM (Retd)

Secret Empire : The KGB in Russia Today. By J. Michael Waller, *Boulder, Westview, 1994, p. 390, \$ 19.95 (PB), ISBN 0-8133-2323-1.*

After the attempted coup of Aug 1991, the official line taken, was that KGB was abolished. But few accepted this premise. As the world watches a new generation of Russian leaders, struggle to establish, democratic institutions, a persistent question arises. What has happened to the former KGB?

In this provocative book, it is apparent, that the officers & leaders of KGB have been able to maintain their power and influence in the new security set up. The author has made use of the revelations from former and current KGB officers, to trace the history and evaluate the present state of KGB institutions, of internal repression & external aggression. He offers a new perspective on Gorbachev's rise to power and his relations with KGB and his insulation of the KGB from perestroika.

Subsequently, in the current democratic Russian politics, no serious attempt was made, to make the security agencies more accountable to the public. According to the author, the citizens, continue to be denied of their civil, political, economic and human rights. Today, Boris Yeltsin enjoys the benefits and perils of a strong but independent internal security agency.

J Micheal Waller is a Fellow of the American Foreign Policy Council. He is an expert on matters Russian, especially security services.

The book is about a contemporary subject, written in a lucid and simple style and is highly readable.

-- Maj Gen Ram Nath, SM

Tupolev Aircraft Since 1922. By Bill Gunston, London, Putnam Aeronautical Books, 1995, p. 254, £ 35.00, ISBN 0-85177-866-6.

For the first time a book about the sturdy, proven aircraft of Russian origin which could maintain the balance of power has been brought out in English language - thereby bridging a long felt gap about Russian aviation industry, its aircraft, technology and design in the English speaking part of the globe. Apart from the historical aspects of its growth and chronology of its development, hitherto unknown not only to the Western world but also to the users of their products, it also throws light on the potential and future of the pillars of erstwhile civil and military multi-role aircraft builders, after the break up of the USSR and consequent changes in the Geo-Political/strategic realities.

The author has taken pains in evaluating all available data and documents before recording his findings. A few technical details have been made available only now which were not made known to the users and operators for the past over three decades, either during negotiations, or training and maintenance activities even in the USSR - mainly due to the language barrier. Personally I feel more knowledgeable about the

Russian machines and munitions ten years after I ended my 20 years active association with them.

— Air Vice Marshal S.S. Malhotra, AVSM, VM (Retd)

Black Hands of Beijing : Lives of Defiance in China's Democracy Movement. By George Black & Robin Munro, *New York, John Wiley, 1993, p. 390, \$ 24.95, ISBN 0-471-57977-7.*

This book gives an account of the various people. Particularly two students — CHEN Zimming and WANG Juntao, born in 1952 and 1959, and a railroad worker Han Dongfang, born in 1963, and their protests in support of the democracy movement.

Written in easy style it describes their every day lives, their involvement in demonstrations in the Tiananmen Square in 1989. Their final trials and imprisonments. Chen and Wang, get 13 years in jail; Han, contracts T.B, is released and finally goes to the USA for treatment.

The book is of no particular military value.

— Maj Gen Partap Narain (Retd)

Barbarian Eye : Lord Napier in China, 1834 : The Prelude to Hong Kong. By Priscilla Napier, *London, Brassey's, 1995, p. 246, £ 25.00, ISBN 1-85753-116-7.*

In Priscilla Napier, the family have their Galsworthy. She has written Napier Family saga spreading over nine books. Her present book largely based on Lord Napier's own letters and Journals is about the attempted settlement between the British Sea-traders and the Cantonese authorities. True to type, the Viceroy Loo declined to accept Napier's credentials (translating his name-'Nay-Peer' or 'Vile Labouring Beast'.) All that was traded were insults. Lord Napier, a patient man, did establish a trading outpost, Hong Kong, and left appealing description of life in the early 19th Century. A well got up book.

— Colonel Balwant S Sandhu

China's Road to the Korean War. The Making of the Sino-American Confrontation. By Chen Jian, *New York, Columbia Univ, 1994, p. 339, £ 42.00, ISBN 0-231-10024-8.*

At the conclusion of the Second World War and after the Japanese armistice, Russia accepted the surrender of all Japanese troops in Korea North of the 38th parallel and the United States control of all areas South of it. By June 1949, both the Russians and US had withdrawn their troops from the Korean peninsula. In June 1950, the much stronger North Korean People's Army (NKPA) attacked the weak forces of the Republic of South Korea across the 38th parallel with forces well armed, trained and equipped with Soviet material. South Korea sought US intervention which was carried out under UN approval.

Ever since the outbreak of hostilities, the Chinese desisted on entering the war in Korea to help the North Koreans because Mao thought that he would have difficulty in convincing the party and the Chinese people of the necessity of intervention unless China's territorial safety was directly threatened by the Americans. Therefore, when in October 1950, the UN General Assembly, at the urging of the US, approved the establishment of UN Commission for the Unification and Rehabilitation of Korea and the UN troops crossed the 38th parallel for an offensive directed towards the Yalu River, the only choice before the Chinese was to enter the war and help the beleaguered North Koreans. Upto July 1953, the Korean War was fought vigorously with many ups and down when finally the conflict lasting over three years ended with the signing of the Cease Fire Agreement on 27th July 1953.

This book is the first comprehensive account of the Chinese entry into the Korean War and will provide a fresh analytical framework from which to study Chinese foreign policy and security strategy. The author has carried out a comprehensive research and produced various facets of the Chinese intervention in Korea. A good and well documented book for all students of military history.

— Maj Gen Prem K Khanna, MVC (Retd)

The Sino-Indian Border Dispute and Sino-Indian Relations. By Xuecheng Lin, *Lanham Univ Press of America, 1994, p. 221, \$ 46.50, ISBN 0-8191-9699*

The 1962 Sino-Indian border conflict is a subject which has already been copiously written about and documented; the post cold-war thaw and on going improvement in Sino-Indian relations is however of significant interest.

Dr. Liu of the Institute of Asia-Pacific Studies of the Chinese Academy of Social Sciences, Beijing, summarised in this very readable book, these two topics based on his doctoral thesis submitted to the University of Texas, U.S.A. Coming from a Chinese scholar, the book arouses expectation of an insight to an entirely Chinese perspective. In this, however, the reader may be disappointed. The author has put together his analysis largely on the basis of numerous available writings of Indian and western journalists, with little significant input from any Chinese sources, due perhaps to what the author admits as limitations under existing Chinese official rules.

The focus is on Sino-Indian relations as they have developed since the two countries gained independence, almost together. The author argues that the ebb and flow of the relations between the two countries have been conditioned by the global "cold war" environment that existed between the USA-Soviet Union-China. With the collapse of the Soviet Union and the end of the Cold War, the time is opportune, according to the author, for a lasting settlement of the border dispute and normalisation of relations.

Dr. Liu has written extensively on South Asian politics and is the co-author of two books on Indian political parties.

— Maj Gen N M Sobti

The Civilian in War : The Home Front in Europe, Japan and USA in World War II, Ed By Jeremy Noakes, *Exeter, Univ of Exeter*, 1992, p. 200, £ 9.95, ISBN 0 85989 357 X.

A book on a subject of the morale of the civilians in war - the study of which is necessary, but generally neglected. It covers the wide range of nations - Britain, Germany and Japan subjected to direct bombing attacks; the occupied countries like France, Holland and Poland. U.S.A. which was away from direct effects of the war, to the Soviet Union which was the scene of the greatest land battles, in which she lost one in seven of its population.

The effect of the war in nine countries has been analysed by as many authors. WW-II involved more civilian casualties than the military, and the morale of the civilians was given higher priority than in the First World War.

The book is wellworth its price — Pounds ten only, it should find its place in all libraries dealing with defence planning.

— Maj Gen Partap Narain (Retd)

Letters From Sarajevo : Voices of a Besieged City. By Anna Cataldi, *Shaftesbury, Element*, 1993, p. 195, £ 12.99, ISBN 1-85230-500-2.

This book is a compilation of extraordinary letters written by Serbs to friends and relatives. These letters depict the moving voices of victims who are under seige for months and under heavy bombardment.

These eighty letters, the majority of which had been smuggled out at great personal risk carry the tales of woe, prayers, curses, cries and sometimes hidden humour, describe the horrors of war and the tragedy the people are undergoing in Sarajevo. These letters touch your heart and soul with the sufferings they are undergoing and you have to marvel their courage and enduring spirit with which the people of this war stricken city are facing the future.

— Col P K Vasudeva (Retd)

The Helsinki Process : Negotiating Security and Cooperation in Europe. By John Fry, *Washington, DC, National Defence University*, 1993, p. 441.

A National Defence University, Washington, D.C. Publication, the book under review is a comprehensive account of "The Helsinki Process" which started in 1972 when the Western European governments moved towards a reunified Europe. The author, John Fry, a career Senior Foreign Service Officer of U.S. State Department has done a wonderful job of presenting an upto date chronology of the Helsinki process and covers the ground upto November 1990 (Paris Summit). The author has given a detailed account of Human Rights issue, military Security, Glasnost and Perestroika and the dynamics of the negotiations.

The Helsinki Final Act pp. 179-268 is the most informative part of the book and relevant for those who are working towards disarmament, environment and human-rights issues. Altogether, an absorbing account of negotiation process and an essential reference book for those who are involved in the shaping of policy matters be it defence or foreign affairs.

— Major (Dr) Sunil Chandra, Ph.D.

The British in the Mediterranean, By Peter Dietz, *London, Brassey's, 1994, p. 223, £ 29.95, ISBN 0-08-037716-5.*

British strategists have held the opinion, at least since the late 17th century that "he who holds the Mediterranean holds the world". A gloss on that comment might be: "He who holds Malta, holds the Mediterranean and, ergo, holds the world". So writes the author. This being so, it is not very difficult to perceive why the British dominated that area till the end of the Second World War.

The author begins the story with the acquisition of Tangier by Britain which King Charles II received as part of the dowry for marrying Catherine of Braganza in 1661. (Incidentally, he also got the island of Bombay). From there the story becomes a familiar one of colonization of Gibraltar, Minorca, Malta, Cyprus. British naval, air and ground forces were based in Egypt which were to play an important part in the Anglo German skirmishes in North Africa during the Second World War. His description of the trials and tribulations of Malta during the war makes excellent reading. The author, quite rightly, criticizes the Anglo-French attack on Egypt and the Suez Canal in 1956.

This is a book which should appeal to both the historian and the tourist alike. The author has taken great pains to write, unlike a tourist guide, the history of various relics of the British presence in the area, both in war and in peace, for the millions of British tourists that flood the area, for sun, nostalgia and recreation. The end of that country's three hundred years of presence in the area has been extensively covered. British political presence of the past has been replaced by the wealthy tourists. Perhaps keeping these tourists in mind, the publishers have put a prohibitive price tag. What a pity?

This is a very useful and informative book.

— Cdr S Varma, SC, IN (Retd)

Countdown to Cassino : The Battle of Mignano Gap, 1943. By Alex Bowlby, *London, Leo Cooper, 1995, p. 210, £ 18.95, ISBN 0-85052-410-5.*

In September 1943, after the near disastrous but ultimately successful allied landing at Salerno in Italy, Hitler, guided by Field Marshal Kesselring the German C-in-C in Italy, decided to go on the defensive to delay the allies as long as possible. Germans correctly guessed the allies aim of capturing Rome by advancing through the Liri valley which was guarded by Monte Cassino. Consequently, it was decided to

fortify the Gustav Line which passed through Cassino to form the main line of defence. Germans also built the Brenhardt Line passing through Mignano, south east of Gustav Line, with the aim of holding up the allies till the fortifications on the Gustav Line were ready.

The task of clearing the Germans from the allies route was given to the untried General Mark Clark and his 5th Army. Before the allies could get to Cassino and beyond they had to clear the Mignano Gap. When the allied advance started on 2 November, the 5th Army, consisting of two US and one British corps, faced a well prepared 14th Panzer Corps, a part of the German 10th Army. Although heavily outnumbered, the well entrenched Germans fought tenaciously till the main defences of the Gustav Line, only 12 miles away, were ready. The Germans had achieved their aim and in the process also inflicted terrible losses on the allies.

Alex Bowlby has written a very well researched and readable book on this preliminary battle which is always forgotten in the shadow of the more well known battles for Cassino and Monte Cassino where the famous Benedictine monastery was ultimately destroyed by the allied bombers. Mr. Bowlby has clearly shown the weaknesses in allied command, the shortcomings of its leadership and highlighted the bad planning, despite reading Ultra decrypts, which ultimately made the allies forget the classic teaching of war - that the enemy should be attacked at its weakest point, not at its strongest. At Mignano the Germans may have lost a little ground but they had won the battle.

-- Cdr S Varma SC, IN (Retd)

The New Germans. By Giles Radice, *London, Michael Joseph, 1995, p. 235, £ 16.50, ISBN 0-7181-3780-9.*

With the breaking of the Berlin wall and the reasonably smooth reunification of Germany, plenty of books on this subject have been published in the last four years. Giles Radice, a prominent Labourite and sitting member of British Parliament has written this book with his vast knowledge of Anglo-German relations, being a regular participant of the Konigswinter Conferences. As he writes, "What happens to Germany is vital to Britain and to the rest of Europe."

He has clearly brought out how the two Germanys have had differing histories since the Second World War and how this has affected the course of reunification, where the East Germans feel colonized and the West Germans resent paying through their nose for this privilege. He has also covered the reasons for the strength of Germany and how it has benefited from federalism, Germany being essentially tribal by nature. Brief histories of the Federal Chancellors since the end of the war and how each affected German history makes compelling reading. He has also clearly spelt out the reasons why the present Germany is totally different to the Weimar Republic, immediately preceding the advent of the Nazis. He has commented on a whole range of questions like the Bundesbank and the strength of the Deutch Mark and its effect on the European and world economies. He has also commented on the role of Germany in NATO, the European Union and in the complex modern world.

Since the book has been specifically written for British readers he has written a chapter on Anglo-British relations and how they would benefit with a strong Germany. As to the future he writes "A confident European Germany, tied to its partners by trade, treaty and integration, is crucial for the dynamism and direction of European Community."

A good book which is highly recommended to those interested in modern German history.

— Cdr S Varma, SC, IN (Retd)

Greece and Europe in the Modern Period : Aspects of a Troubled Relationship. Ed by Philip Carabott, *London, King's College, 1995, p. 130, £ 8 (Pb), ISBN 1-897747-01-2.*

This book is a compilation of eight scholastic and thought provoking essays written by eminent and famous scholar historians. The centuries old conscientious troubling dilemma for identification whether Greece belongs to the West or the East still pervades the day-today thinking with seemingly no conclusion in sight till today. These soul searching, long and heated debates became more acute and vociferous after the Greek War of Independence, 1821. The tilt for Greece is towards forming part of Europe as it influenced the literature, culture and civilisation of various European Countries in varying degrees as compared to its influence towards the East.

The concept of 'New Europe', or 'European Continentalism' or European Federation keeping the national sovereignty of member nation-states intact is well argued. The authors are unbiased in their approach in analysing this emotionally explosive subject. An interesting book.

— Maj Gen J N Goel (Retd)

Slaughterhouse : Bosnia and the Failure of the West. By David Rieff, *London, Vintage, 1995, p. 240, £ 8.99, ISBN 0-09-947831-5.*

On collapse of centralising Communist regime in Yugoslavia, independence was declared by Croatia and Slovenia. Belgrade reacted fast and took control of Croatian Karanjia and Eastern Slovenia. Muslim dominated Bosnia defied their Serb population and opted out of the Federation thereby inviting a severe backlash.

The author has narrated at length the woe of the Bosnian Muslims who on eviction from Serb majority areas encountered a closed Croatian frontier. They became victims of black marketeering and brutal sexual sadism even at the hands of their own militia. The UN Protection Force actions and indifference of the West and the United States have come under severe criticism. Being a European nation and not a distant Somalia or Rowanda (!) Bosnian Government had expected intervention; UN operations were confined to humanitarian work and provision of supplies only.

Bosnian Army has received liberal supplies of weapons from Iran and Pakistan.

At present no side starts defeated. Under the circumstances partition of Bosnia appears imminent.

The narrative espouses the cause of Bosnian Muslims and laments Serbs for settling old scores of Ottoman atrocities.

— Brig K Narendra Singh, IA (Retd)

Rebel Hearts : Journey within the IRA's Soul. By Kevin Toolis, *London, Picador, 1995, p. 384, £ 15.99, ISBN 0-330-34243-6.*

Kevin Toolis strings a powerful narrative of the centuries old, unequal conflict between the British crown and the Irish whose bitterest aspirations the IRA symbolises.

At the start, Kevin tells you where his sympathies are and then goes on to recount in fluid, hard hitting, alive mostly first person prose, the harshness, the ugly injustice, the stark courage between the dispossessed Irish ancients and their suffering descendents; the law enforcers among whose tanks, are also many cads. The book is not for the squeamish. It is a detailed and revealing portrait of the world of the Irish Republican Army - the world's most enduring Terrorist cause.

— Colonel Balwant S Sandhu

The Italian Revolution : The End of Politics, Italian Style. By Mark Gilbert, *Colorado, Westview, 1995, p. 204, \$ 14.95 (Pb)*

From 1976 to 1992, it appears that Italy did not have a democracy but *partitocrazia*: a political system where interests of political parties dictated the form of governance. Since 1992, Italy had really a *cleptocracy* : a state where enhancement of personal interests and wealth were the motto. Corruption, nepotism, scams in galore and extortion practically at all levels dominated the very fabric of society and government. The rule and dominance of mafia in Southern Italy were accepted as part of daily existence.

How the political parties subverted constitutional reforms to stay in power is well documented. The projected presidential form of governance considered to be a dynamic guarantor of the entire politico - institutional system makes a fascinating reading as its propagation is full of intrigues, double speak and opportunism on part of practically all the political leaders. Till 1992 Italy had allowed itself to be governed by men who were morally unfit to rule. The time for change had come.

One cannot but help comparing the political scenario in various developing countries with that of Italy and amazes at the similarities. A very interesting and informative book about the machinations of political parties to stay in power at any cost.

— Maj Gen J N Goel (Retd)

British Victory in Egypt, 1801 : The End of Napoleon's Conquest. By Piers Mackesy. London, Routledge, 1995, p. 285, £ 45.00, ISBN 0-415-04064-7.

This book documents the story of the British Expeditionary Force that ended the bogey of French invincibility and enabled British Army to establish a foothold in Egypt thus allowing expansion and protection of its Indian Empire. Earlier the British Army for forty years had tasted nothing else except defeat and ignominy everywhere. Its discipline made them formidable to everyone but the enemy. Abercromby, its C-in-C, rejuvenated this crestfallen army by relentless training at Marmaris in the Mediterranean, imbued a sense of purpose and a spirit to win. It sealed the fate of French Army of the Orient, also because of its inept and rash handling by Menou its C-in-C. The honour and reputation of British Army stood redeemed after the Egyptian Campaign.

The strategy of caution and advance to Cairo rather than manoeuvring for capture of Alexandria were the main pillars of victory in Egypt and consequent ouster of the French. Alexandria surrendered soon after the opening salvos of attack.

The fluidity of language is interspersed with sardonic humour at places. A fine narration of classic military history.

— Maj Gen J N Goel (Retd)

The End of Superpower : British Foreign Office Conceptions of a Changing World 1945-51. By Stuart Croft, Aldershot, Dartmouth, 1994, p 225, \$ 59.95, ISBN 1-85521-449-0.

The author describes, as is evident from the title of the book, the British climbdown from the Superpower status during 1945-51 albeit reluctantly. Wholehearted attempt was made to cling to the position through Fourpower approach (UK, USA, USSR, France) to resolve global problems in 1945-46. Due to the weakened economic position of Britain the concept cascaded into the creation of a desperate Third Force leadership approach alongside the Big Two. During the period 1948-49 attempts were made to balance Soviet influence with the Western ballast. 1950-51 saw the losing game of equality of influence between the UK and the USA, on issues like the Korean War and the German rearmament.

The author's effort in churning the plethora of records and evolving a huge bibliography is praiseworthy. The book makes an absorbing reading and recommended to the students of statecraft and diplomats.

— Air Cmde S K Bhardwaj (Retd)

Cruelty and Silence : War, Tyranny, Uprising, and the Arab World. By Kanan Makiya, London, Jonathan, 1993, p. 367, £ 18.99, ISBN 0-224-03733-1.

This book condemns the cruelty perpetrated by the Arabs against Arabs; chastises the Arab intellectuals for closing their eyes towards it; and castigates the Arab

people, in general, for remaining silent over it. The author has taken five characters - Khalil, a Kuwaiti staying back in Kuwait during the Iraqi occupation; Abu Naydar, a former Iraqi army officer who revolts against Saddam Hussain; Omar, a young engineer lingering in prison; Mustafa, a Kurd subjected to chemical gas attack and Taimour, another Kurd who escaped execution - to knit their tales of woe into a mosaic of Arab 'Anfal' — meaning repression. This book shows the Arab voice is coming out of 'pooshiyya' (Arab woman's face covering).

— Lt Col Daljit Singh (Retd)

In Pharaoh's Army : Memories of A Lost War. By Tobias Wolff, *London, Bloomsbury, 1994, p. 210, £ 12.99, ISBN 0-7475-1919-6.*

Personal experiences and reminiscences of the author, inducted as a young subaltern into the interior of a war-torn interior of Vietnam - specifically the village My-Tho (Mekong Delta) and his earlier youth seeking an identity and a career, have been woven into an amusing narrative by Tobias Wolff.

In an environment where survival itself was a matter of chance, and the suffering peasantry around non-responsive if not suspect, the impact of depressing isolation and hopelessness of the cause can be very exacting. The author has portrayed these with sensitivity and humour, to offer the reader an enjoyable fare.

— Maj Gen S K Talwar (Retd)

The Middle East Military Balance 1993-1994. By Shlomo Gazit, Israel, *Jaffee Center for Strategic Studies, 1994, p. 575, £ 72.95 (HC), ISBN 965-459-012-3.*

Strategically located, the Middle East has been the most volatile region of the world since the 2nd WW. It has seen many conflicts - between Israel and its hostile Arab nations, the longest war between Iran - Iraq; the latest being the conflict between Iraq and the Multi National Force led by the US. The book has analysed the Arab perception of Israel's qualitative edge and its ramifications for arms control in detail.

The emergence of the petro-dollar meant that most states of the region could arm themselves with the latest state-of-the-art weapon systems. These states took pride in enhancing their military power without any real evaluation of their security needs. A series of chapters in the book deal with this aspects of an arms race in the region.

This year's Military Balance highlights:

- (a) Review of the Israel - Arab peace process.
- (b) The main strategic ramifications of recent developments in the Persian Gulf Area on the Arab and Muslim Middle East.
- (c) The future strategic ramifications on the technologies of modern weaponry on Middle East armies and the strategic balance.

- (d) A detailed update covering the defence forces and infrastructure of the countries of the region and the PLO.

Jaffee Centre for Strategic Studies has to be complimented for carrying out a thorough research and produce various facets of the Military Balance in the Middle East. A very good reference book for all students of military history.

— Maj Gen Prem K Khanna, MVC (Retd)

The Iran - Contra Scandal : The Declassified History. Ed. By Peter Kornbluh and Malcolm Byrne, *New York, The New Press, 1993, p. 412, \$ 24.95, ISBN 1-56584-047-X.*

The Iran-Contra affair 1984-86 in the U.S.A, hit the world headlines, due to the trials of Lt Col Oliver North and Vice Admiral Pointdexter. What transpired in the trials was generally a unknown story.

Due to the Freedom of Information Act, subsequently, documents including, North's personal note books were released. This book is a compilation of such documents, by the National Security Archive and edited by two of their analysts.

The affair involved selling of arms to Iran by U.S. government in a clandestine manner, to free hostages and use the money, to provide illicit paramilitary aid to the CONTRAS, a democratic resistance group, engaged in attempts to overthrow the legal government of Nicaragua.

The book makes very interesting reading and speaks volumes for the double standards and hypocrisy of the then U.S. government and the massive campaign of attempted cover up, at the highest level, by spreading disinformation and halftruths of the worst kind.

As a fall out, the credibility of not only the past, but also the present U.S. Administration has suffered, having inherited the legacy, methods, systems and modus operandi of the past.

— Maj Gen Ram Nath, SM (Retd)

Kurdistan During the First World War. Ed By Kamal Madhar Ahmad, *London, Saqi Books, 1994, p. 234, £ 45.00, ISBN 0-86356-084-9.*

This book deals with the problems of Kurds from eighteenth century to the end of the First World War, highlights their historic claim to become an independent sovereign state like others carved out of Asia Minor and contests the controversial role played by Kurds in the massacre of Armenians.

It is a tale of unfulfilled promises by the then great powers i.e.. Britain, USA, Russia and France. Britain did not honour the famous words of its Prime Minister

Lloyd George in Parliament in January 1918, promising sovereignty to Kurds and creation of Kurdistan. It was denied the political entity as promised by the Allied Powers in the Treaty of Sevres of 1920. USA forgot the commitment of its President. Woodrow Wilson concerning Kurdistan. Russians amalgamated parts of Kurd's land after the treaty of Golistan signed between Iran and Russia after their War from 1804-1813. France was more interested in its ambitions in Europe and was only concerned with its economic dominance in Middle East. The respective national interests over-rode the fate of Kurds.

Kurds, at present, are scattered over Turkey, Syria, Iraq, Iran and Southern parts of Russia. The other cause for Kurdish people in not achieving a homeland of their own was lack of vision, agency to unite various tribal chieftains and a concerted policy. In international politics, promises are mere words till given a concrete shape and Kurds are still fighting for a place in the sun. One does remember the recently solved Palestinian question and the unsolved Pukhtoon problem on the Durand Line.

— Maj Gen J N Goel (Retd)

Oil and Politics in the Gulf : Rulers and Merchants in Kuwait and Qatar. By Jill Crystal, *Cambridge, Cambridge Univ. Press, 1990, p. 242, £ 15.95, ISBN 0-521-46635-0.*

Strategically located, the Middle East has been the most volatile region in the world since the 2nd WW. The emergence of petro-dollar has brought many social and economic upheavals affecting political systems. In a region where states have witnessed revolutions and coups, Kuwait and Qatar have presented an enigma; the endurance of almost anachronistically stable monarchical regimes in spite of overwhelming changes precipitated by oil revenue.

Beneath the apparent political stability and continuity lie sea changes in the system. This study has sought to identify these changes, to analyse the impact of external oil revenue on politics and to explain the key transformation that occurred : the emergence of new coalitions and new institutions.

Partly based on a year's field work in the Gulf, this book goes far beyond previously published account of the region in its analysis of the effects of oil on domestic politics. This updated edition includes a discussion of the Gulf War and its aftermath and should appeal to all international relations specialists who would like to know more about this strategic area and solid local history.

— Maj Gen Prem K Khanna, MVC (Retd)

Singapore : City-State in South-East Asia. By Philippe Regnier, *Honolulu, University of Hawaii, 1991, p. 300, \$ 18.00, ISBN 0-8248-1407-X.*

'What Malta is in the West, that Singapore would become in the East', these were prophetic words written in 1819 by Sir Thomas Stamford Raffles to the Marquis

of Hastings, the Governor General of Calcutta. Raffles appreciated the Islands' commercial importance as an emporia of the Malaysian region and meeting point of great sea routes, dominating the Malacca Strait. The British manoeuvred to get Singapore ceded to them by the Sultan of Johore in 1824 and ruled over the colony till 1965 when it became an independent republic. The rapid transformation of Singapore since then into a modern and prosperous sovereign City-State is one of the miracles of the post colonial period. The success story of the tiny State with its enviable record of efficiency and excellence is remarkably well brought out by Dr. Philippe Regnier in this book which is an English translation of his original French text published in 1987. It is a comprehensive analysis of the historical background, socio-economic developments and political philosophy of Singapore as well as its role in the region. He traces the origin of the City-State to the line of emporia that have existed in the Malay world for centuries and describes its ascendance as a conduit for regional trade with the rest of the world. Its meteoric economic progress and dramatic rise as a financial capital of the region are given in detail. The political philosophy of the State in a multi-ethnic and multi-religious pluralistic system are examined. He explains the subordination of politics to collective economic growth and social security but tends to gloss over the issue of human rights in Singapore. No such examination can be complete without considering the dynamic role of Lee Kuan Yew in development of not only Singapore, but also the Asean. Regnier is an ardent admirer of Lee Kuan Yew, the builder of Singapore, and explains Lee's rationale for guided democracy. It is a commendable book and a worthwhile addition to the region's library.

— Air Marshal M L Sethi, PVSM, AVSM (Retd)

Dictionary of the Modern Politics of South-East Asia. By Michael Leifer, *London, Routledge, 1995, p. 271, £ 45.00, ISBN 0-415-04219-4.*

South East Asian States lie to the East of the Indian sub-continent to the South of the peoples Republic of China and to the North of Australia.

The dictionary of politics and international relations of South East Asia attempts to encapsulate the nature and experience of the region through individual entries arranged in alphabetical order. Information, analysis and commentary are provided about significant episodes, treaties, indigenous concepts and political parties, and movements and regional organizations. Biographical notes are included on principal political figures, past and present.

The Thumb nail national sketches do not - and cannot - cover every aspect of a country's pulse, yet they provide an admirable stance to the political realities, both for study and doing business. A general and specific further reading advice concludes each section.

— Colonel Balwant S Sandhu

Japan and the British Commonwealth Occupation Force 1946-52. By Peter Bates, *London, Brassey's (UK), 1993, p. 270, £ 29.95, ISBN 1-85753-000-4.*

Peter Bates, who served as a Japanese-speaking intelligence officer in the British

Commonwealth Occupation Force (BCOF) in Japan, has been able to give a personal touch to the events he narrates in his well researched and very readable book. In it he has sensibly avoided the mundane details of day to day routine of the various national contingents of the BCOF. He has covered these events with a wide brush effectively taking in the important events and capturing the spirit of the multinational Commonwealth Forces and the team work they achieved. The author covers in some detail how and why the Force came into being without avoiding the controversies, clashes and differences of opinion that arose during the negotiations and how these were smoothed over.

The book analyses the reasons for various countries wanting to participate in the occupation of Japan. For the UK it was meant to regain their prestige in the East and was essential for safeguarding and promoting British economic interests in and with Japan. The Australians saw it as a means of qualifying for a substantial say in the forthcoming peace-treaty negotiations with Japan to ensure the security of the Pacific region. It further brings out how the British Commonwealth tried in vain to obtain somewhat of an equal partnership with the Americans in the occupation responsibilities and in the Military Government of Japan. Unfortunately for them Gen MacArthur, with full support from Washington, would have none of it and insisted on keeping the occupation, especially the Military Government, an all American affair. The Commonwealth presence was accepted only because it helped the US to economise on its manpower and other expenditure. Nevertheless, it still had to be strictly on American terms that required the BCOF to be integrated with and subordinated to the US Command and with no part in the Military Government.

In spite of all the short-comings, the British accepted to participate in the occupation and the author tries at length to justify the decision. It is still difficult to understand why indeed the British agreed to participate in such an inconsequential role playing second fiddle to the Americans especially when none of the reasons for their participation would be fulfilled by it. Perhaps the UK was coming to terms with the reality of their reduced position in the post-war world.

Along with that of the BCOF, the author's resentment shows up clearly at what he terms as the Americans silent conspiracy to ignore the BCOF. He illustrates this by quoting the fact that MacArthur's biographer makes just one mention of 'the 38,000 Tommies (Sic)' who shared the occupation with 1,52,000 GIs by the end of 1946. They were referred to only once and never again. Although Peter Bates has been more even handed than this in narrating the Indian Contingent's contribution yet Indian readers cannot but fail to notice that out of the 16 photographs included in the book none has any Indian theme. This said, it must be stated that this deficiency in no way detracts from the value of this well researched and well written work which should be of considerable interest to Indian readers.

-- Maj Gen S C Sinha, PVSM (Retd)

Asian Security 1994-95; Compiled. By the Research Institute for Peace and Security, London, Brassey's 1994, p. 244, £ 25.00, ISBN 1-85-753-0748.

This is the Sixteenth edition of Asian Security, the Annual Report of the

Research Institute for Peace and Security covering twelve months ending 30 June 94. To that extent it is somewhat dated.

The Report surveys the domestic scene and the areas of economies, foreign policies, defence of USA, Russia, Japan and China, the first two with emphasis on Asian Policy, and the last covering policies in Hong Kong, Taiwan and the South China sea dispute. Other areas are the countries of South East Asia, Central and South Asia and the South West Pacific. ASEAN and APEC activities are also emphasised.

Conflict scenario as in the Korean Peninsula, the Parcel and Spratly group of Islands, Indo-Pak stand off and the situation in J and K and nuclear proliferation is also considered particularly in the context of North Korean intransigence

-- Lt Gen P E Menon, PVSM (Retd)

Field Marshal KM Cariappa: His Life and Times. By Brig CB Khanduri, *New Delhi, Lancer Publishers, 1995, p. 452, Rs. 450/-, ISBN 1-897829-75-2.*

Field Marshal K M Cariappa rightfully deserves a place amongst the architects of modern India, as he not only laid the framework for the army and other services and consolidated the nation's army - fragmented and dis-jointed consequent to post-World War II demobilisation and the Partition, but also set a leadership model for the officer cadre.

By dedicated research, and wide-based enquiry, - probing into records commentaries, and first hand impressions of the Skipper's contemporaries, Brig Khanduri has built-up and projected the true personality of his subject, Fd Marshal Cariappa, and his responses as a soldier, as a prolific conceptual leader and as the patriotic Indian that he was.

This book is both a biography of the Field Marshal and a critique of British government's diffidence vis-a-vis Indianisation of the Indian army, the painful experience of the Partition and the post-independence tensions imposed on the military by the political masters or their civil bureaucracy. These chapters, practically covering the entire twentieth century offer a thought provoking insight into civil-military re-activity through the decades to follow. The author has also detailed the Indo-Pakistan confrontation on Kashmir during 1947-49 as a welcome new look.

The book is a very useful addition to personal and institutional libraries.

-- Maj Gen S K Talwar (Retd)

India's Foreign Policy, 1947-92 : Shadows and Substance. By Harish Kapur, *New Delhi, Sage Publications, 1994, p. 231, Rs 245.00*

The book titled *India's Foreign Policy* portrays the profile of India's Foreign Policy from 1947 to 1992 - a period spanning four-and -a-half decades. It is in two parts. Part I deals with 'Goals of Foreign Policy' and Part II relates to 'Decision-Making Process'. This completes the cycle.

A case has been made out that with the partition of India into the Indian Union and Pakistan, India's territory, economic resources, armed forces, population, productive capacity, etc. have shrunk considerably; and, therefore, India's clout in international affairs has been reduced correspondingly in the world affairs on the diplomatic front.

The author, Harish Kapur feels that India is one of the few countries in the Third World whose image declined continuously so much so that she ceased to count internationally in the family of nations. He has criticised somewhat harshly India's political leadership for its indecisiveness. He has also described "Personality" factor as a crucial element in this regard.

The book which is an excellent exposition, has to be read critically and thoughtfully by our Ambassadors, Counsellors and others charged with directional changes in India's Foreign Policy as it portrays the profile from 1947 to 1992 and shifts the paradigm from political diplomacy to economic diplomacy by way of prognosis so as to project India's image with a sophisticated understanding of India's Foreign Policy.

-- Prof T N Rastogi

A Saga of Service : A History of the 1st Battalion the Maratha Light Infantry Jangi Paltan: 1768 to 1993. By Maj Gen (Retd) E. D'Souza, PVSM, *Bombay, the Author, 1994, p. 600, Rs. 300/-*

There are only a few battalions of our army that have been in existence for two and a quarter centuries, and an infinitesimal number that have a recorded history covering such an extensive period. 'Jangi Paltan' is one such battalion, and it is fortunate to have had General Eustace D'Souza to chronicle its exploits, from its first battle honour of Mysore of 1792 against Tipu Sultan, to the latest one earned at Jamalpur in 1971.

A Saga of Service is a glowing tribute paid by a distinguished general to his beloved Maratha soldiers - the 'Ganpats of Jangi Paltan'. What is exceptional however, is that the General is author, editor, as well as publisher of this excellent narrative. It is obviously the General's commitment to his battalion that has sustained him through this labour of love. The author not only tells the story of this battalion's exploits in war, but also brings into focus the strong bonds of friendship between its officers and its men, that made such exploits possible. Here before us, is a warm lively adventure story of a unit's march through the corridors of time, by a soldier who has been part of this story during the critical battles of the Italian campaign during World War II. Typical of the narrative is this extract of how Sep Namdeo Jadav, a simple company runner, won a well deserved VC. He says '..... He then climbed to the lip of the flood bank, and gave that clarion call "Chattrapatti Shivaji Maharaj Ki Jai", and waving his comrades of Y Coy forward calling out in Marathi "Chala Chala dushman la"!

In addition to the account of this unit's prowess in battle, the author gives the reader an insight into the customs and traditions of this unit, its practices and precepts, the evolution of its dress, its honours and awards, its Roll of Honour, its Mess Silver, anecdotes and personal accounts of its old and bold, and a wealth of information that makes this history comprehensively complete. Most important of all, General

D'Souza brings out lessons that could be learnt from the battalion's 225 years of campaigning. Military histories are meaningless if one cannot apply lessons of the past to conflicts of the future. It is here that the Saga of Service stands tall, and blazes a trail for future military historians to follow.

-- Maj Gen Ian Cardozo, AVSM, SM (Retd)

Winged Memoires. By Air Vice Marshal S.S. Malhotra, AVSM, VM (Retd). New Delhi. Ebouz Classics. 1995, p. 222, Rs 250/-, ISBN 81-7369-002-03.

"Mally Douglas" is not the name of the author of Winged Memoires but a combine of the two pet names that Air Vice Marshal Surjit Singh Malhotra acquired during his four decade long and distinguished service in the IAF. During this period he had the honour to fly many famous foreign heads of states and high dignitaries and legendary Indian leaders and government heads. It is during the same time that he was conferred with the highly prestigious awards of the Ati Vishisht Seva Medal and the Vayu Sena Medal by the President of India for his meritorious services to the nation.

Winged Memoires is no record of military aviation, though the title may tend to give some such impression. It is infact a biographical extension of his service experiences, exuding a subtle humility and language almost 'non English' in tone and temper at some places but with the declared aim of laying bare his own humble start at birth and his determination to make good in life with a rare dedication and a purpose. In short, it is an artistic sensibility of the passage of the most fruitful period of his life within the confines of the Air Force Blue. Yet in the process, the reality of the obstacles that he had to face and conquer, while moving from one ladder to the next higher one, comes home in stark vividness leaving the reader to find in it an engrossing and fruitful insight in life and its ways and grasp the underlying message "Better be a constant performer than be an over". What better inspiration could his "Winged Memoires" provide to the youth and society today to shape itself in these turbulent times that lie ahead before the country.

A very engrossing and fruitful reading all told.

-- Air Mshl S K C Gupta, PVSM, VSM (Retd)

"Democracy and Violence in India and Sri Lanka". By Dennis Austin. London, Pinter Publishers, 1994, p. 101. (Chatham House Papers), £ 22.75, ISBN 1-85567-222-7

Published as part of Chatham House Papers, the book examines the relationship between violence and democracy in South Asia. India and Sri Lanka which have a history of success with democracy also witness political violence and communal conflicts which are frequent, brutish and widespread. The coexistence of democracy and violence is a paradox; democracy is usually seen as an anti-dote to violence. How could there exist a violent democracy? The author examines the problem in fair detail and surmises that "the democratic governments would 'limp on' more strongly in India and less certainly in Sri Lanka".

A well reasoned and lucid book.

-- Lt Gen P E Menon, PVSM (Retd)

The Crucible of War, 1939-1945; The Official History of the Royal Canadian Air Force, Vol III. By Brereton Greenhouse and others, *Canada, Univ of Toronto Press, 1994, p. 1096. \$ 50.00. ISBN 0-8020-0574-8.*

This is another excellent volume on the role of RCAF & their crew in the Second World War. With a gripping and meticulous account of the formation of RCAF as an essentially military service in 1938, the inherent problems to structure, maintain and overlook its operations and the role of politicians, parliamentarians and armed force personnel in the rise of this overseas force to contribute to the war games. The book elucidates through its chapters, the invalidity of prewar plans and strategies in an actual war situation. It has brought to the fore the magnificence, a value of Air Force to war efforts as also the minimum impact it seems to have had with bombings on well defended German vital areas - This has given ample reason to chart out well planned target lists as a part of war planning.

The book is a treasure for avid readers in history and for those seeking to polish up strategic planning.

-- Dr. Sudha Raman, Ph.D.

Technology and the Proliferation of Nuclear Weapons. By Richard Kokoski, *Oxford Univ Press, 1995, p. 351, £ 30.00, ISBN 0-19-829170-1.*

The Gulf Conflict brought about a new tool in anti-proliferation efforts - 'Special Inspections', by the IAEA under Resolution 687 of the UN Security Council. How far these went in uncovering the mysteries of the Iraqi nuclear programme for enriching Uranium and Plutonium is well documented in this reference publication authored by Kokoski in a comprehensive manner. It focuses on the state of the art in fissile material production and enrichment technology, the description of safeguards (timely detection of diversion of significant quantities) and export controls besides the changes therein being currently considered. The anti proliferation regime is sought to be strengthened by means of information sharing, verification and intelligence gathering - with special emphasis on HUMINT and satellite monitoring. These issues have been highlighted practically through the case studies of Iraq and North Korea.

The purpose of the book is to stress on prominent technological developments which may be endangering the anti-proliferation regime. The three main elements are addressed - crucial technologies, potential ramifications of the existence, spread and the development of these technologies and the likely policy options that can be adopted to aid anti-proliferation resulting from the dangers due to the spread of these technologies.

The book needs to be read by all policy makers, disarmament experts and those connected with matters concerning national security and technological/foreign policy issues. It gives a broad overview of an assessment method to measure technology towards fissile material production - qualitatively and quantitatively, which would be of considerable use to defence analysts. The derivation of proliferation intelligence from satellite information is lucidly explained.

Dr Kokoski, an eminent physicist now with SIPRI is ably qualified to have given such a well researched and documented book on the subject. Whilst in the zeal of effectively implementing anti-proliferation, he has also but just briefly touched upon how the IAEA is financially going to cope with vastly increased responsibilities of enforcing safeguards with a relatively modestly growing budget. This is typical of the current dilemma of vastly increased responsibility of global organisations charged with performing security and peace related activities but lacking the financial backing to do so. The other significant issue is how moral are 'special inspections' versus national sovereignty. These could have been given greater coverage.

On the whole, a very useful and readable book - even for the layman if not the expert, provided one is not overawed by many long scientific formulae for enrichment. It is especially relevant for non NPT states to draw lessons from Iraq and North Korea.

— Capt MS Mamik, IN

The New Central Asia and its Neighbours. Edited by Peter Ferdinand, *London, The Royal Institute of International Affairs, 1994, p. 120, £ 22.50, ISBN 1-85567-139-5.*

The emergence of the five independent republics of Central Asia, consequent on the collapse of the Soviet Union, has evoked both hope and anxiety. Hope in that the peoples of the five republics are masters of their own destiny. Anxiety because of the fragile ethnic and clan relationship obtaining in the region. The civil war in Tajikistan is an example of what could happen.

Dr. Ferdinand and the other contributors, Dr. Aikner, Prof Bondarevskn, Hyman and Dr. Robins have examined developments within the five republics with particular reference to developments in economic cooperation and relations with adjacent states. The articles focus on relations with Russia, popular attitudes towards Russian minorities, relations with the Middle East with special reference to Iran, Turkey and Israel, and their postures with regard to the civil war in Afghanistan, the Indo-Pak stand off and China.

India's interest in the Central Asian region are centred on her politico - strategic concerns and perceived commercial interests. India has enjoyed a favoured position for historical reasons. Pakistan too, has shown great enthusiasm in exploiting new openings.

Altogether, an absorbingly interesting study and a useful addition to our library.

— Lt Gen PE Menon, PVSM (Retd)

Weapons Proliferation in the 1990s. Edited by Brad Roberts, *London, The MIT Press, 1995, p. 473, £ 18.00, ISBN 0-262-68086-6.*

The Volume under review contains articles published between 1991 and 1995 ie., spanning the period between the end of the Gulf War and the extension conference of the Nuclear Non proliferation Treaty (NPT). As many as 26 articles by different authors have been grouped into five chapters : Proliferation's changing dimensions; Non proliferation in the 1990s; the counter - Proliferation debate; Arms Controls New Non Proliferation Roles, and Proliferation, and World Order.

The articles, generally well researched and well argued, bring out the concerns

of the Nuclear 'haves' over the issue of proliferation and the danger involved in permitting unrestrained 'horizontal proliferation'. Vertical proliferations is not generally addressed in the first four chapters, but chapter V enunciates the concerns of the 'South' in adequate measures. It is suggested that the situation in the South is as yet pre-historical being still embroiled in 'struggle' war, injustice and poverty. The South faces a set of daunting, inter connected problems in the economic, political and security areas which often co-exist with corruption and repression on the one hand and rising expectations on the other.

There are yet other areas of concern to the South emanating from the changing attitude of the North.

- (a) The environment issue : the absorptive capacity of the eco system is being pre-empted by the North with admonitions to the South to meet enhanced standards and ensure cooperation.
- (b) North's weakening commitment to the Sovereignty of the states of the South through the former's increased concern about human rights, which is now elevated as an international rather than a domestic concern. There is a concomitant willingness to intervene in a State's internal affairs - new rationales appear to be minted daily : human rights, democracy, drugs, environment, weapons proliferation and so on.

The final Chapter V questions the traditional and conventional thinking which highlights the risk of not only misunderstanding the problem but also the danger of policies which may eventually prove counter productive.

-- Lt Gen P E Menon, PVSM (Retd)

The Diary of Anne Frank: The Critical Edition. Edited by David Barnouw and Gerrold Van Der Stroom, Translated by Arnold Pomerans, *New York, Doubleday, 1989, p. 719, £ 30.00, ISBN 0-670-82048-2.*

This critical edition of the famous Diary of Anne Frank has been prepared by the Netherlands State Institute for War Documentation and contains a summary of the report by the State Forensic Science Laboratory of the Ministry of Justice compiled by H. J. J. Hardy. The main aim of this edition of the Diary, according to the Editors, is to provide the reader an opportunity to compare the present and the original diary entries of Anne Frank with each other, as well as with the original Dutch version of the *Diary of Anne Frank*.

The writer of the Diary was a Jewish girl, 13 years old, living in Netherlands, then under German occupation during the Second World War. Two years later, the Diary ended when the family hiding was discovered by the German Gestapo, and the family sent to a German concentration camp, where Anne Frank died two months before Liberation, when she was not yet sixteen. Posthumously, Anne Frank has become the symbol of the tragedy in which six million Jews were murdered by the Nazis; and as Ed van Thijn, Mayor of Amsterdam said, "She made the incomprehensible story of the Second World War comprehensible." The book contains a large number of photographs and photo-copies of documents to support the authenticity of the Diary which has become a classic in war-time literature.

-- N.B.S.

Additions to the USI Library for the Quarter - Ending March 1996

(The books reviewed in October-December 1995 issue have been added to the Library during this quarter but not shown in this list)

| Ser No. | Author's Name | Title | Year |
|-------------------------------|--------------------------------|--|------|
| Biography | | | |
| 1. | Luther, Narendra | Hyderabad Memoirs of a City | 1996 |
| 2. | Josey, Alex | Lee Kuan Yew : The Crucial Years | 1994 |
| 3. | Seshan, TN | The Regeneration of India | 1995 |
| 4. | Gates, Bill | The Road Ahead | 1995 |
| 5. | Chopra, PN | The Sardar of India : Biography of Vallabhbhai | 1995 |
| Human Rights - India | | | |
| 6. | Bajwa, GS Dr. | Human Rights in India : Implementation and Violations | 1995 |
| India | | | |
| 7. | Sodhi, HS | India : Must it Burn and Splinter | 1995 |
| India - Army | | | |
| 8. | Sharma, BN (Brig) | What they don't Teach you at Army School | 1996 |
| India - China War | | | |
| 9. | Kler, Gurdip Singh (Lt Col) | Unsung Battles of 1962 | 1995 |
| India - Foreign Policy | | | |
| 10. | Ghoshal, Baladas, (ed.) | India and South-East Asia : Challenges and Opportunities | 1996 |
| 11. | Vanaik, Achin | India in a Changing World : Problems, Limits and Successes of its Foreign Policy | 1995 |
| India - History | | | |
| 12. | Taylor. PJO | The Rani of Jhansi | 1995 |

J & K - History

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|-------------------------------------|--|------|
| 13. Aggarwal, JC and Agrawal, SP | Modern History of Jammu and Kashmir 2 vols. | 1995 |
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Military - Intelligence

- | | | |
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| 14. Kasturi, Bhashyam, Dr. | Intelligence Services : Analysis, Organisation and Functions | 1995 |
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Military Leadership

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|-------------------|----------------|------|
| 15. Woodward, Bob | The Commanders | 1991 |
|-------------------|----------------|------|

North-East India

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| 16. Bhaumik, Subir | Insurgent Crossfire : North-East India | 1996 |
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| 17. Frankel, Fancine R (ed) | Bridging the Non-Proliferation Divide | 1995 |
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Pakistan

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| 18. Ahmed, Akbar S. (ed) | Pakistan : The Social Sciences' Perspective | 1990 |
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Pakistan - Foreign Policy

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|--------------------------|--|------|
| 19. Ali, Mehrunnisa (ed) | Pak-Afghan Discord : A Historical Perspective Documents 1855-1979 | 1990 |
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