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JANUARY-MARCH 1998

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EDITORIAL

At the national level mid-term elections to the Twelveth Lok Sabha during February-March 1998, have once again resulted in a hung Parliament, which may lead to political instability and connected national security problems for the next couple of years or so.

During the first week of March 1998, the United Service Institution of India (USI) co-hosted a seminar with Oxford Research Group on 'Global Security and Nuclear Disarmament'. Representatives of the Five nuclear countries and three threshold nuclear states i.e. Israel, Pakistan and India participated. The lead article in this issue on "Nuclear Disarmament and the Role India can Play" by Lt Gen Satish Nambiar, is a perceptive analysis in a holistic framework of the international arena. The author does not foresee India's renunciation of the nuclear option in the near future. By keeping the nuclear option open, India should be able to stress the point that unless there are moves towards total elimination, non-proliferation will remain as much a "pipe dream" as some consider elimination of nuclear weapons to be.

It is generally accepted that the nuclear weapons no longer have utility as a weapon of war, and their use would be suicidal for mankind. The conventional wars are also on the decline. Low Intensity Conflict (LIC), comparatively, is a simple and cheaper option. LIC is being referred to by some as the warfare of the future. The Army has been involved in counter insurgency operations in different parts of the country for a long time. In the North East, most states have faced insurgency in varying degrees at one time or the other during the last five decades. The Nort East region taken as a whole remains the least developed and the least emotionally and politically integrated with the rest of the country. It has remained peripheral and marginal to the political concerns of India's mainstream politics. An article on 'Insurgency in the North East' by General KV Krishna Rao has been included in this issue. In part I of the Article, the author has covered the historical background and major problems connected with insurgency in the States of Nagaland, Manipur and Mizoram. Problems connected with remaining States of the North East are proposed to be covered in Part II of the article to be included in the next issue of the Journal.

In a recent opinion poll regarding public's image of various professions, the Armed Forces scored high and were considered most respected and least corruptable. Yet the Armed Forces are not attracting the right-type of officer material in sufficient numbers. The other aspect pertains to making the Armed Forces contented vis a vis organisational issues, higher control and conditions of Service. An article on 'The Image of the Armed Forces' by Lt Gen AM Vohra discusses these aspects in details. A number of thought provoking suggestions are contained in the Article to bring about improvements.

In developing countries for quite sometime, the factors that will affect the people are trans-national issues. An article on 'Trans-national Threats to International Peace and Security - Terrorism and Drug Trafficking' by Air Marshal KD Chadha, focuses on religious intolerence, ethnic and cultural divergences as the primary causes for it. Suggestions for formulation of credible responses to such threats have also been included by the author.

The world is at the threshold of a revolution in the field of Information Technology (IT), which has thrown up new challenges. An article on 'National Perspective on Information War' by Maj Gen Yashwant Deva, covers both the military aspects to beset the enemy on the battlefield and its wider role, to protect information systems critical to the functioning of the society.

'A Bio-Data to Sell the Soldier' by Brig NB Grant, highlights the difficulties being faced by the ex-servicemen to get rehabilitated in civil jobs. While there may be several reasons for this, one important factor is the way the soldier writes his bio-data. Guidelines for using suitable civil equivalent terminology and other important aspects have been emphasised to enable the ex-servicemen to project their true worth.

Nuclear Disarmament : The Role India Can Play

LT GEN SATISH NAMBIAR, PVSM, AVSM, VrC (RETD)

Introduction

Nuclear disarmament has been the subject of some study at various courses of Instruction over the years. As the Additional Director General, and subsequently the Director General of Military Operations of the Indian Army from 1989 to early 1992, I was responsible for the formulation of the draft doctrine and evolution of concepts, for Nuclear, Biological and Chemical (NBC) Warfare defence, as also for the evaluation of equipment for this purpose. It is amusing to hear and read the statements made with great authority by eminent American diplomats and analysts, that India and Pakistan were on the verge of a nuclear war in 1990. In actual fact not only was there never even the hint of anything nuclear, though the Armed Forces of both countries were in a high state of readiness, the Army formations were not even deployed for a full-scale war. It may be of interest to know that my counterpart in Pakistan at that time was the present Army Chief, General Jehangir Karamat, with whom I was in touch telephonically on at least a weekly basis. It is another matter altogether that the then US Ambassadors in New Delhi and Islamabad claim the credit for having averted war on the Indian sub-continent. Regarding a role for India, it is essential to highlight some important elements of the nuclear debate in the country.

Shades of Opinion

At one end of the spectrum on this subject, lie those

Excerpted from the inaugural address delivered at the USI on 02 March, 1998 by Lt Gen Satish Nambiar, to the Joint USI - Oxford Research Group international consultations on 'Abolition of Nuclear Weapons : Removing the Obstacles'.

Lt Gen Satish Nambiar, former Deputy Chief of the Army Staff, was the first Force Commander and Head of Mission of the United Nations Forces in the former Yugoslavia. He is currently the Director of the USI.

strategists, analysts, theorists and media-persons who have formulated and propounded views over the years. In this category (which incidentally, is not too large), are the "hawks" who advocate India going overtly nuclear; some who advocate a more "moderate" approach; and others who are firmly "anti-nuclear". At the other end of the spectrum, are the large percentage of the Indian population. They know little or nothing about nuclear matters, and care even less. For most, the concern is sheer survival; employment, food, shelter, a reasonable quality of life that includes education of their children. For others in this category, like those in schools and university; it is a matter of sheer indifference; for most of them, the nuclear debate is rather unreal-science fiction stuff; they are much too involved in getting the best out of life (justifiable in its own way).

In between, is a sizable percentage of the intelligentsia - people who apply themselves to national and international affairs, and aspects of national security; who in the process, are aware of the nuances of the nuclear debate and its connotations. Only a minuscule percentage, I dare say, compared to the overwhelming percentage in the second category I mentioned earlier, but much larger than the numbers in the first category. This is the category represented by me and some of my colleagues from the United Service Institution of India.

Some Aspects of the International Debate that impinge on Opinion in India

It is generally accepted that there is merit in the argument that nuclear weapons no longer have utility as a weapon of war, that their use would be suicidal for mankind, that it is immoral and unacceptable to use or even threaten such use against non-nuclear weapon states, and that continued possession could encourage others to follow. Yet there is a substantial body of strategists, members of the establishments, and others who mould opinion, in the nuclear weapons states, who believe that elimination of nuclear weapons is a "pipe-dream", even the most ardent supporters of elimination appear resigned to the idea that "time bound" elimination is not feasible now because "fool-proof" ver-

ification measures cannot be instituted. For obvious reasons, we find such a position hard to reconcile with, and therefore find it increasingly difficult to convince ourselves that India should deny herself the option.

It appears ironic that the "most powerful democratic nation" is not willing to eliminate its nuclear weapons while exhorting others to do so. Such a stance militates against the movement towards elimination. The threat perceptions put out to justify the retention, and possible use, of nuclear weapons bear little or no scrutiny to an analyst; in fact they detract from the credibility of treaties like the NPT and CTBT because they are based on the presumption that some of the signatories of these treaties will not adhere to the provisions. It hardly appears logical to suggest that the USA with its awesome conventional military capability, needs to retain nuclear weapons to deal with nuclear terrorism or rogue states. Equally, one can see no logic for the retention of nuclear weapons by countries like France and the UK; unless it is in order not to lose their permanent seats on the Security Council.

Actually, when one views the whole nuclear debate and the various phases it has gone through, in an objective manner, it would not be an overstatement to suggest that there has been a breach of faith by the nuclear Five in not pursuing the major provision of the NPT - that of the elimination of nuclear weapons. This makes all treaties questionable. There are therefore no moral grounds for the nuclear weapons states to preach non-proliferation.

There is a conviction in a considerable section of Indian thinkers that unlike Britain, France and China, India was punished for carrying out a nuclear test. It would appear that the first steps towards establishing multilateral technology controls, in the form of the Nuclear Supplies Group guidelines and the Missile Technology Control Regime, were partly taken in response to Indian actions - the 1974 explosion, the launch of the SLV-3 rocket in 1979, and the Integrated Missile Development Programme - and that the controls have been used ever since to constrain India's space and civil nuclear programmes. There is also resentment

over the role China has played in helping Pakistan acquire nuclear weapons technologies, and the freedom granted to China to develop and deploy its own nuclear weaponry in contrast to the persistent intervention in India's programme. The fall-out is that the punishment and perceived discrimination against India, has ensured broad political support for India's stance on the subject, despite the disinterest, scepticism or hostility with which many Indians generally regard nuclear weapons themselves.

India's Stand

It may be appropriate at this stage to place the Indian position in perspective by quoting Professor William Walker, who was at the USI a couple of years back; "For reasons internal and external to the country, India is experiencing extreme difficulty in finding a pathway out of the labyrinth that she has ventured into... Finding the pathway out of the labyrinth is therefore one of the most important tasks that India and the international community faces today. But the labyrinth is not just of India's making; it also connects, especially through China, into a much larger labyrinth, comprising the policies of the nuclear weapons states and their approaches to non-proliferation and disarmament, and indeed the whole edifice of the non-proliferation regime. There is preference for treating the 'Indian problem' as a local issue. It is more than that : it is a systemic issue and may be incapable of resolution without systemic movement".

There is considerable unanimity among the strategic community in India that within the framework of the existing environment in the nuclear arena, and more particularly, the regional context, we have to determine for ourselves what is in our national interests; no other country or set of countries, can work this out for us, or attempt to legislate for us on this issue. To many of us, in retrospect, the restraint we have displayed in not pursuing the nuclear option with vigour after the explosion conducted in 1974, while possibly a gesture on the moral plane, and a demonstration of our sense of responsibility as a member of the international community, was an error of judgment at the security level. All the more reason that there is a feeling that enough is enough, and

that we should now take measures purely in the context of our national security interests; no medals are forthcoming for demonstrated good behavior or restraint.

In this context, it may be relevant to comment on what is often referred to as inconsistency in India's stand on the issue. Here again, many of us hold the view that no apologies are called for; because it is a nation's sovereign right to constantly review its security needs and make necessary modifications to earlier positions.

There are a few of our colleagues who advocate what is called, for want of a better word, a "satyagrahi" approach; the non-violent approach made famous by Mahatma Gandhi in securing freedom for India; which implies renouncing the nuclear option, and one presumes signing up on the NPT, CTBT, FMCT et al. The arguments advanced to support this approach are logical and well taken no doubt, but do not carry conviction with a large section of the strategic community because the premises on which the approach is based are themselves debatable. Mahatma Gandhi was unique; people like him come once in a generation or two. There are many in the country, of my generation that were not even in their teens when India secured Independence, having seen what has transpired in the country in the last fifty years, who are deeply sceptical of the Gandhi phenomenon. Not because we consider him any less great than he was, but because he could not imbue that sense of commitment, dedication and selflessness that was his strength, to more than a handful of his so-called followers. We are therefore paying the price for a freedom that came to us relatively cheap; we did not have to shed blood for it; in fact, ironically, we shed some blood immediately after attaining Independence. As such, it is inevitable that the larger numbers among us do not subscribe to the "satyagrahi" approach. It is not an ideal world; hence we must have the will and the strength to look after our interests. Even this section joins the mainstream in questioning why India should be indefinitely kept isolated from access to nuclear technology for generation of its needs of power; the embargo strengthens the very grievances that underpin India's antagonism to the non-proliferation regime.

It also appears to many of us that rather than the threshold states, it is the nuclear weapon powers that are most guilty of practising ambiguity; their lack of clarity over long term intentions is arguably the most damaging factor at play in the current situation.

The Role India can Play

Within the framework of what I have said so far, let me try and suggest what is the role India can play in the continuing efforts towards nuclear disarmament. India's renunciation of the nuclear option is not on the cards in the foreseeable future; this has to be understood and accepted. By keeping the nuclear option open for herself, India should be able to stress the point that unless there are moves towards elimination, non-proliferation will remain as much a "pipe-dream" as some consider elimination to be. Maybe that will provide a degree of motivation to the nuclear weapon states to work towards elimination as a goal within some sort of a time-frame. India's relations with China, and China's own approach to nuclear arms control and disarmament, are fundamental to India's position in regard to a resolution of the issue.

There is a view that the CTBT may collapse in due course because India has not gone aboard; which in many ways would be the best outcome for India, as her options would then be wide open again, and she could represent the views of the developing world by her presence in the "Club", so to speak. That India would have assumed the role of a "spoiler" would be rather uncharitable, given the unhesitating acceptance of the Chemical Weapons Convention that more than adequately demonstrates her similar desire for complete nuclear disarmament. She should continue to be a model for restraint, particularly by scrupulously refraining from sharing or exporting nuclear know-how to others within the existing norms.

She could also pronounce a policy of "no first use" or "no use against non-nuclear states" as a model for some of the

others to follow, while encouraging greater debate on the subject on a more level plane.

Finally, India could make efforts to develop and demonstrate a clear dividing line between the country's civilian and military nuclear research and development programmes. In the process, as one of the founding members of the International Atomic Energy Agency, India could put the Agency's agenda back on track in context of its twin role-that of promoting peaceful nuclear technology use, while ensuring that technology is not used by countries for non-peaceful purposes. At present, it would appear that there is a divide with the developed world seeing non-proliferation, and the developing world seeing the promotion part as the key role of the Agency.

NOTICE

Members interested in undertaking research projects under the aegis of the Centre for Research, may submit research proposals through respective Service Headquarters, or to the Director, for consideration by 31 Dec. each year. At present, four chairs have been instituted for one year projects, namely Field Marshal KM Cariappa Chair, Admiral RD Katari Chair, Air Marshal Subroto Mukherji Chair and Prof DS Kothari DRDO Chair. Final approval of projects will be the prerogative of the Board of Management, taking into account the views of Service HQ and DRDO, where necessary. In due course, it is hoped to increase the scope for research activity, including some two-year projects undertaken by serving officers on study leave. Copies of the Rules for Award of Fellowship Grants and Conduct of Research, may be obtained from the USI.

Insurgency in the North East

Part I

GENERAL KV KRISHNA RAO, PVSM (RETD)

Introduction

Insurgency in the North-East is a complex and intricate, problem confronting the Nation and has its origins in the pre--Independence period. To be able to comprehend it in all its facets, it would be necessary to go into the historical background and focus attention on certain important aspects which are, and will continue to be, relevant in the future also.

Background

The North-Eastern Region comprises of the seven States of Assam, Arunachal Pradesh, Nagaland, Manipur, Mizoram, Tripura and Meghalaya. While the States of Arunachal Pradesh, Nagaland, Mizoram and Meghalaya originally formed part of Assam or were under control of its Governor in British India, the States of Manipur and Tripura were Princely States. Assam itself was part of Bengal Presidency during the British period upto 1874. During their rule, Assam including part of present Meghalaya was developed to some extent, because of its potential for oil, tea and forest wealth. The remaining peripheral States were mostly inhabited by different tribes of Indo-Mangoloid origin; and the area was treated as an Excluded Area with a system of Inner Line Regulations, for reasons of security and to prevent exploitation of the tribals by the plains people. The British generally maintained control of the area by slowly extending the administration, with the help of the Assam Rifles, a para-military force, but otherwise left the tribals to themselves without interference or undertaking much development. Whenever the tribals carried out depredations into the plains

Excerpted from the text of the National Security Lecture - 1997, delivered at the USI Auditorium, New Delhi on 12 December 1997.

General K V Krishna Rao, PVSM is former Chief of the Army Staff. He has been the Governor of Nagaland, Manipur, Tripura and Mizoram. At present he is the Governor of Jammu and Kashmir.

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areas, the British used to mount expeditions with the Army and subjugate the tribals. Many foreign missionaries were allowed to function in the area, and apart from preaching religion, they carried out considerable social work such as providing medical attention, spreading literacy and weaning away the tribals from the pernicious practice of head-hunting. However, some of them indulged in mischievous political activity, such as promoting separatism and fostering secessionist tendencies among the tribals. The Freedom Struggle in the Country also did not reach out to many of these areas, due to the constraints of Inner Line Regulations and lack of adequate effort on the part of the leaders of the Freedom Movement. Because of all these factors, the people of the Region generally remained aloof from the mainstream of political life of the Country.

Even after securing Independence, the national leadership remained pre-occupied with some major problems the Country was confronted with, such as the after-effects of partition, the threats from Pakistan and China, the consolidation and integration of the Princely States and what was British-India, efforts to achieve economic self-reliance and so on. Consequently, the North-Eastern States could not receive the attention that they deserved. Even the infrastructure available was grossly inadequate, to open up these areas for a long time. Partition of the Country deprived the use of the communication net-work through the then East-Pakistan. Due to perceived lack of concern and lack of development of the area, a feeling of neglect and deprivation grew among the people of the Region. Further, many of the political leaders of the area were introverts, the administration was inexperienced, and the people were poor, illiterate and lacked a sense of nationalism, for no fault of theirs. Clashes often occurred due to inter-tribal rivalry. The people were deeply conscious of their identity, customs and culture; and resented any interference. Otherwise, they are simple, friendly and jovial.

The Nagas initially sought autonomy as far back as 1929 when the Simon Commission visited India. Subsequently, they demanded independence when the Country was partitioned. The Tirap area of Arunachal Pradesh and the hill areas of Manipur,

which are also inhabited by Nagas, became involved in the Movement. In the Valley area of Manipur, which is mainly inhabited by Meitis who are non-tribals, a Pan-Mangoloid movement was started in 1965, with secessionist aims. In Mizoram, a Movement for independence began in 1961 due to a feeling of total neglect by the mother State Assam. In Tripura, the tribals started a Movement for secession from the Country in 1978, because of being swamped by a large influx of refugees from Bangladesh. In Assam itself, a Movement for ridding the State of 'foreigners' started in 1979, again due to considerable influx of people from Bangladesh.

Pakistan and subsequently China, with whom the Country had adversarial relations, exploited the situation, by instigating the people, providing armed assistance and promoting secession of these areas from India. Further, the Government of Burma did not have control over its border areas with India, particularly in the North; and many insurgent groups such as Chins, Kachins, Kerens and Shans thrived there, under the patronage of China. Later, Bangladesh and now even Bhutanese territories are being exploited. To be able to understand the peculiar causes responsible for insurgency and measures required to be taken in respect of each State, it would be necessary to analyse the conditions in each State separately. Here I may mention that North-East is not a problem that can be easily tackled.

Insurgency and Counter-Insurgency

For the benefit of those among you who have not participated in an insurgency, or who have not been involved in Counter-Insurgency Operations, I shall briefly explain the problems involved in these! Insurgency has been defined as an armed struggle to over-throw the government in power by force and to establish a revolutionary regime. If not checked in time, it could lead to a full-scale guerrilla or liberation war. It occurs because of either a genuine conviction among the people concerned of being different from the rest of the Country, or of fear of loosing identity, or of a feeling of neglect and deprivation, or of undue interference which could be detrimental to the interests of the people or of a sense of injustice, or a combination of some or all of these fac-

tors. It thrives when interference from countries inimical to the Nation is possible, particularly when a common border exists with them. Other conditions that help are geographic isolation of the area, suitability of terrain, ethnic similarity of people across the borders, support of population and availability of inspiring leadership. An insurgency Movement generally comprises of a Political Wing and a Military Wing. The Political Wing determines the objectives to be attained, the measures to be taken and the broad military strategy; while the Military Wing deals with the implementation of the strategy laid down. Both these are generally structured on the lines of the political and military set up in the Country. The manpower of the Military Wing generally comprises of unemployed and disgruntled youth, although it has been seen that even Government employees are subverted and become a party to the Movement. The tactics employed by the hostiles include hit and run raids, attacks on isolated posts, ambushes, sniping, kidnapping, assassination of Government and pro-Government people, explosions, destruction of communications, extortion, intimidation, coercion, imposition of taxes, threats and so on, with a view to terrorising the population, paralysing the Government and forcible taking over of control. Government, administration and police forces are infiltrated into and subverted. When Security Forces take effective action, efforts are made to impose caution and obtain suspension of operations by making allegations of atrocities, violation of Human Rights, genocide and so on. Extensive propaganda is carried out at national and even international level by manipulating and even coercing the media.

To deal with insurgency effectively, the root causes will have to be identified and remedial measures taken. Insurgency is basically a political struggle, and needs political measures to eliminate it. The use of force on its own, will not solve the problem. While the use of force is necessary to bring the situation under control, concurrently, political, economic, administrative and sociological measures will have to be taken to deal with the main causes of insurgency. It is vital that there is great understanding, cooperation and coordination between the civil and the military, for success to be achieved. On the political front, it is essential that a clear cut policy is evolved and disseminated. The national

policy has been to permit no secession of any area under any circumstances. Any problem will have to be solved within the frame work of the Constitution. Wherever possible, the problem should be tackled through a democratic Government in the State, by providing it all possible assistance and making it accountable. The Administration should be responsive, firm but sympathetic. On the military front, the Security Forces need to develop intelligence, understand the tactics of the insurgents, coordinate the efforts of different agencies, dominate the area effectively, maintain strict discipline among their ranks, carry out civic action to win over the people and endeavour to make themselves acceptable to the people. It must be ensured that insurgents are isolated and firmly dealt with, without alienating the population at large, whose hearts and minds must be won. As the task is of a politico-military type, and being generally intricate and challenging, the military leadership selected should be of a high order. Over all, the effort should be to make the people realise the futility of insurgency, obtain their cooperation by providing a sense of security and resolving their legitimate problems, and eliminate insurgency as early as possible, with a view to restoring normalcy and the authority of the Government.

I shall now deal with each State and its major problems connected with insurgency briefly.

Nagaland

Nagaland spear-headed insurgency in the Country and offers an interesting case-study.

The Naga Hills District was formed in Assam in 1866. In 1918, a Naga Club was formed to discuss problems of Nagas with the British. In 1929, a delegation of Nagas met the Simon Commission and sought autonomy. In 1945, a Naga Hills District Council was formed to rehabilitate the economy of the area which suffered during the Second World War. This was converted to Naga National Council (NNC) in 1946. The NNC submitted a memorandum to the Cabinet Mission demanding apart from other things, that the Naga Hills should be constitutionally included in an au-

tonomous Assam, in a free India, with local autonomy and safeguards for the interest of the Nagas. After the British declaration in February 1947 to grant India Independence, the NNC demanded an interim government of the Naga people for a period of ten years with full powers. In June 1947, an Agreement was reached between Sir Akbar Hydari, the then Governor of Assam and the NNC, known as the Nine Point Agreement, which envisaged considerable autonomy for the Naga people. One of the important points of Agreement was that all the forests transferred to Sibsagar and Nowgong districts of Assam were to be brought back under one unified administrative unit in the Naga Hills District. Yet another important point was that the Governor of Assam would have special responsibility for a period of ten years to ensure the due observance of the Agreement; and that at the end of this period, the NNC would be asked whether they require the Agreement to be extended for a further period, or a new agreement regarding the future of the Naga people be arrived at. Some extremist elements led by Mr. Phizo Angami claimed that this point gave the Nagas the right to even secede from the Indian Union. However, the administration clarified that the point only permitted them to suggest any modifications to the pattern of the administration within the Constitution of India and nothing beyond. Phizo, however, propagated that the Government of India had gone back on the Nine Point Agreement and incited the people to seize power. On August 14, 1947, Phizo declared the independence of Nagaland. He was arrested alongwith his associates. The Government of India once again clarified the position. Subsequently, the safeguards provided in the Nine Point Agreement were incorporated in the Sixth Schedule of the Constitution of India.

Phizo was released in 1949 and became the President of NNC in 1950. In May 1951, he held a referendum in which he claimed that 99 per cent supported independence for Nagaland, but this was not accepted by the Government. Soon thereafter, Phizo started arming and preparing his faction for insurgency; and carried out attacks on police, administration, loyal villagers and even Assam Rifles posts. On March 22, 1956, Phizo formed a rebel government, known as Naga Federal Government (NFG)

and a Naga Federal Army (NFA). The Union Government then inducted the Army, operations were launched under General Officer Commanding Assam and the situation brought under control by mid-1957. However, Phizo escaped to Pakistan in December 1956 and subsequently to London in June 1960 (later died in June 1990). A number of rebels either escaped into the then East Pakistan or went underground in the jungles.

In August 1957, a Naga Peoples Convention (NPC) was held by the moderate leaders from all the tribes; and as a result of the recommendations of this Convention, the Naga Hills - Tuensang area (NHTA) was brought into existence by the Union Government on December 1, 1957. To deal with the Underground, the Armed Forces (Special Powers) Act 1958 was enacted for the State. Subsequently, a Sixteen Point Agreement was arrived at in July 1960 between the NPC and the Union Government. Based on this, the State of Nagaland Act was passed by Parliament in September 1962, the Indian Constitution was duly amended by the insertion of Article 37IA which provides adequate autonomy, and President Radhakrishnan inaugurated the State at Kohima on December 1, 1963. Thus, necessary provisions were made for protecting the identity of Nagas and for promoting their interests. At the same time, the Governor had special responsibility for law and order, so long as the situation remained disturbed due to hostile activities. A special formation known as 8 Mountain Division was raised on August 1, 1963, for Counter-Insurgency Operations in the area.

While a democratic government was administering Nagaland, the Underground established contacts with Pakistan and China and arranged for training and arms. A number of gangs proceeded to these countries, received training, indoctrination and modern weapons, returned to Nagaland and carried out depredations. In April 1964, a Peace Mission was formed under Shri Jai Prakash Narayan and an Agreement for Suspension of Operations (AGSOP) was signed with the Underground on September 6, 1964. However, while the Security Forces fully abided by the Agreement, the Underground kept violating the same and took advantage of the opportunity to build themselves up. Gangs

continued to go out, return with modern arms and carried out depredations. The Peace Mission was dissolved in 1967. By October 1968, there was a rift in the Underground and a split. One faction which was anti-Communist styled itself the Revolutionary Government of Nagaland (RGN) and worked for a peaceful solution of the Naga problem, while the other remained as NFG working for so-called independence. The Army assisted by some para-military forces and police, carried out vigorous counter-insurgency operations and brought the situation well under control, so much so, that the bulk of 8 Mountain Division could be sent for operations to liberate Bangladesh. However, in August 1972, the Chief Minister was ambushed and as a result, the AGSOP was terminated. While the Underground despatched more gangs to China, the Army launched vigorous operations and once again brought the situation under control; and the Underground to the negotiating table. An agreement known as the Shillong Accord was reached on November 11, 1975, according to which the Underground accepted the Constitution of India, agreed to come overground and deposit their weapons; and were given reasonable time to formulate other issues for discussion for final settlement.

While some of the Underground laid down their arms and were subsequently rehabilitated, the gangs that went to China denounced the Accord, repudiated Phizo's leadership and declared their intention to continue the struggle. A new underground organisation styled as the National Socialist Council of Nagaland (NSCN) was formed under the leadership of Isaac Swu and Muivah. Over a period, the NSCN built up its strength with both Indian and Burmese Nagas and started depredations once again. A splinter group under Singhya Khmeungan continued to call itself the NFG. Khaplang leads a separate faction of NSCN now. The two main factions are known as NSCN (IM) and NSCN(K). While the situation was maintained well under control by the Army till about the end of 1989, certain political developments resulting in changes in Governments took place, which led to the deterioration of the situation once again. Here it may be mentioned that political instability has been the bane of Nagaland. Inter-tribal feuds, poverty, unemployment, corruption, nepotism and so on further

aggravate the situation. The shifting of 8 Mountain Division, the most experienced Formation to Jammu and Kashmir also resulted in some loss of control.

There is a feeling among the Nagas that two of the points of the Sixteen Point Agreement have not been implemented. These related to the restoration of Reserve Forest Areas and consolidation of contiguous Naga inhabited areas with Nagaland. On the question of Reserve Forest Areas, there have been clashes from time to time between Nagaland and Assam. This is a potential flash point which needs early resolution. Incidentally, there are no forests left in these areas, although a conglomeration of ethnic groups from Assam and Nagaland settled down in these areas. With regard to the consolidation of the Naga inhabited areas, this was to be done if the Nagas of the areas concerned themselves wanted merger. Such areas lie in Manipur, Arunachal Pradesh and even across the border in Burma, which has international ramifications.

Of late, the Pakistani ISI has extended its activities to the North-East also. Further, there is a nexus between the various insurgent groups in the North-East. With all these, there has been a resurgence of insurgent activities. While the Army, along with para-military forces is striving to maintain control, it is necessary that political solutions are found to the political problems. Efforts are on to bring insurgent groups to the negotiating table, and operations have been suspended. It has to be seen as to what progress this would make.

A ceasefire with NSCN(IM) came into force with effect from August 1, 1997 for three months; and this has since been extended by another three months. The NSCN (IM) wants the ceasefire to cover the Naga inhabited areas of Manipur also, but the Government of Manipur declined to accept this, as in their perception, it would mean acceptance of the Greater Nagaland concept. As far as NSCN(K) is concerned, efforts are being made to involve them also in the ceasefire, so that the necessary atmosphere is created for talks. There is considerable rivalry between the two NSCN factions and clashes keep taking place. Each is trying to

get into power ultimately. NSCN(K) operates from the Myanmar Border, while NSCN(IM) driven out of Myanmar by the Khaplang group function from Bangladesh territory. While the ceasefire has generally held on, some odd incidents keep taking place. The Army is concerned that this suspension of operations may lead to consolidation and re-building of the insurgent groups. They would like any political negotiations to take place as early as possible. It may be added that the people of the State expressed themselves in favour of peace and ardently desire it.

As far as any negotiations are concerned, already, there have been a series of agreements in the past, namely, the Nine Point Agreement, the Sixteen Point Agreement and the Shillong Agreement. Every time an agreement took place, there has been a breakaway faction which would not accept the agreement, but would continue with violent activities. With this past experience, it would be prudent to involve all groups including even those who may not be actually indulging in violent activities currently, such as the NFG, Reunification Front (RUF) and so on, as well as the State Government. Further, any agreements, have to be within the frame work of the Constitution, as has been the policy in the past. Otherwise, the Country will get into serious trouble. Concurrently, the Security Forces will have to ensure that any violation of ceasefire are dealt with effectively and that they are constantly prepared for any sudden break-up of talks and resort to large scale violence by the insurgents.

Manipur

Manipur is adjacent to Nagaland and events in Nagaland have had their influence and impact on Manipur also. About one-third of the population of the State are tribals but occupy nine-tenths of the area, while two-third of the population are Meiteis who inhabit one-tenth of the area. Manipur was a princely State which had acceded to the Indian Union at the time of Independence. It became a Union Territory in January 1950 and a full fledged State on January 21, 1972.

An organisation styled as Meitei Marup was formed in 1930

to revive the old Meitei identity. By 1940, an anti-Mayang (outsider) feeling started spreading, due to propaganda that domination by outsiders was the main reason for the economic and social backwardness of the Meiteis. In 1965, an organisation called the United National Liberation Front (UNLF) was formed by some leaders such as Somorendra Singh, to achieve independence. They established links with Naga and Mizo insurgents and contacts with Pakistan and China to obtain support. A pan-Manipuri Youth League was formed in December 1968, which functioned as an overground body for the UNLF. In the later part of 1968, a breakaway group formed a Revolutionary Government of Manipur (RGM), with a view to achieving the liberation of Manipur by an armed revolution. Some gangs were sent to East-Pakistan and China, who after training, arming and indoctrination, started carrying out depredations in Manipur. They organised themselves into the Peoples Liberation Army (PLA) on January 13, 1979 under Bisheswar Singh. Separately, certain other militant organisations were also formed such as the Peoples Revolutionary Party of Kangleipak (PREPAK), and Kangleipak Communist Party (KCP), with the same objective of achieving independence for Manipur.

The Government declared the extremist organisations indulging in violence as unlawful associations, and in September 1980, the entire Imphal Valley was declared as a disturbed area under the Armed Forces (Special Powers) Act 1958; and the Army was given the responsibility to deal with the insurgency problem, assisted by some para-military forces.

As far as the hill areas were concerned, the Northern districts inhabited by Nagas, were affected by Naga insurgency, while the Southern districts were influenced by the Mizo insurgency. 8 Mountain Division was already dealing with the problem, along with the insurgency in Nagaland. Insurgency in the hill areas of Manipur generally fluctuated according to the intensity of the Movement in Nagaland.

Insurgency both in the hills and plains areas was brought under control by the Army, by the time of the Bangladesh War in

1971. However, after the Shillong Agreement 1975, while the NFG laid down their arms, the breakaway group NSCN which denounced the Shillong Agreement, continued with insurgent activities. The depredations by the insurgents included assassination of political leaders, including that of a former Chief Minister who was assassinated on January 30, 1984, attack on Security Forces posts, looting of banks, recruitment, tax collection and general terrorising of the population. However, the Army carried out vigorous counter-insurgency operations and regained control over the situation. Bisheswar Singh even contested elections from jail and was elected as MLA in 1983, although later in August 1994 he was eliminated by the insurgents.

In Manipur also, owing to certain changes in Government towards the end of 1989, instability prevailed. With this, there was recrudescence of insurgency. A new development that took place was ethnic conflict between the Nagas and the Kukis, between Kukis and Paiteis and so on, which resulted in considerable number of Kukis being killed. Owing to political instability, the whole State is once again engulfed in insurgency. The Army along with the para-military forces has been carrying out relentless counter-insurgency operations and is maintaining control. It may be mentioned that Muivah hails from Manipur and is a Tangkhul Naga. So is Shri Rishang Keishing the Chief Minister of Manipur.

As mentioned earlier, the ceasefire that has been brought about in Nagaland, is not applicable in Manipur, owing to the reluctance of the Government for its extension to the State. The non-Naga population, and even certain Naga groups, fear that acceptance would lead to disintegration of the State of Manipur. In fact, despite ethnic clashes between different tribes within Manipur, all the non-Naga groups are together in the rejection of any such ceasefire. The State Government, therefore, have not accepted the extension of ceasefire to Manipur. In fact, if the ceasefire is accepted, it could lead to greater violence in Manipur.

Insurgency in Manipur has to be dealt with firmly and the Security Forces must be given the full backing of the governments both in the State and at the Centre. Concurrently, ethnic

violence must be prevented. The State police and para-military forces should be able to do this, and leave the Army to deal with insurgency which at present, may be beyond their capability, although ultimately they must be made capable of undertaking it.

Apart from political instability, other main reasons for insurgency in Manipur are acute poverty, unemployment, and a feeling of discrimination and neglect among the Valley people. The Manipuris blame the Government for not fulfilling the merger promises. As per the Merger Agreement dated September 21, 1949, Clause 3 of Article VIII says, "The Government of India also undertake to make suitable provisions for the employment of Manipuris in the various branches of Public Services and in every way encourage Manipuris to join them. They also undertake to preserve various laws, customs and conventions prevailing in the State pertaining to the social, economic and religious life of the people". The Manipuris attribute their problems, particularly unemployment, to nonful-filment of the Merger Agreement. Further, there has been inequitable development of the hill areas, owing to certain short-sighted hill leaders in power indulging in parochialism and discrimination. Disruption of Border trade at Moreh, due to restrictions imposed by the Myanmar authorities, also has an adverse impact. All these problems, which are mainly political in nature, and are really the root causes of insurgency, need to be attended to in an effective manner.

Mizoram

During the British period, the present Mizoram State was known as Lushai Hills Area. In 1898, Lushai Hills Area was constituted as a separate district in Assam. In 1936, it was declared as an excluded area under the Inner Line Regulations. The Mizos formed the first political party known as the Mizo Union; and in 1954, they succeeded in their efforts to abolish hereditary chief-ships of villages, and to have District and Village Councils constituted. Subsequently, they demanded separation from Assam, for which a Commission was appointed. Some extremist elements led by Laldenga, even started demanding independence.

There was a famine during 1959-60 and an organisation known as the Mizo National Famine Front (MNFF) was formed to seek and provide relief to the people. In this regard, they gained the confidence of the public by their dedication and impressive results. Not having been satisfied with the measures taken by the Assam Government, the MNFF was converted into a political party styled as Mizo National Front (MNF) during September 1960. On December 21, 1961, the MNF declared as its objective, the unification of all Mizos under a single administration and the attainment of highest freedom. Apart from the problem of famine, the Mizos also feared that their identity would be swamped by the Assamese, were apprehensive of the influx of refugees from East Pakistan and were dissatisfied with the lack of development of their area. A Mizo National Army (MNA) was also formed and gangs were sent to East-Pakistan from November 1964 onwards.

In October 1965, the then Prime Minister rejected the MNF demand for independence. The MNF rose in rebellion on February 28, 1966. They raided police stations, Security Forces posts, treasuries, telephone exchanges, government offices and so on and achieved significant success. A declaration of independence was issued on March 1, 1966 and an appeal was made to the World to accord recognition. Consequently, the Army was inducted to deal with the situation, and after carrying out vigorous operations, control was re-established. The MNF insurgents then escaped into the Chittagong Hill Tracts of East Pakistan. As a result of the liberation of Bangladesh in 1971, the insurgents escaped into the Arakan Hills of Burma, while some infiltrated into the Mizo Hills. Laldenga himself proceeded to Karachi in Pakistan.

The MNF then sent gangs to China between 1972 and 1974; and after their return reorganised themselves and once again shifted to Chittagong Hill Tracts of Bangladesh, where they managed to obtain support from the authorities there. It was apparent that the Bangladesh authorities hoped to use the MNF to counter the Chakma insurgency within Bangladesh. The MNF restarted depredations in Mizoram from 1975 onwards. They assassinated the IGP and other officials, attacked police posts, ambushed

Security Forces, issued 'Quit Mizoram' notices to outsiders and let loose a reign of terror. Even the Lieutenant Governor's car was ambushed and the Lieutenant Governor was injured. The MNF was then declared an unlawful organisation by the Government and operations were launched against them. The situation was brought under control by early 1976 and the MNF agreed to talks within the Constitution. However, due to unreasonable demands by Laldenga, the talks were ended in March 1978. Laldenga opened a liaison office in London in 1975 and functioned from there.

During this period, Mizoram was constituted into a Union Territory in January 1972. Several measures were instituted for speedy development of the State. In August 1980, Laldenga once again agreed to a dialogue with the Central Government and operations were suspended by both sides. However, no agreement could be reached, owing to the unreasonable demands insisted upon by Laldenga. Further, taking advantage of the suspension of operations, the MNF continued their depredations. Thus, once again operations had to be resumed, but Laldenga was allowed to go back in April 1982. The Security Forces launched relentless operations and regained control over the situation.

At last, after realising the futility of insurgency, Laldenga once again came to the negotiating table in 1984. After protracted talks, an agreement was reached between the MNF and the Union Government on June 30, 1986. In pursuance of the Settlement, the MNF laid down their arms and the personnel were rehabilitated in due course. A new Article 371G was inserted in the Constitution whereby special safeguards were provided to protect the identity of the Mizos and to promote their interests. Mizoram became a full-fledged State on February 20, 1987 and Laldenga came to power. However, Laldenga lost his majority later; and a Congress Ministry under Lalthanhawla came to power in the January 1989 elections.

By and large, peace has been maintained in Mizoram ever since. Certain organisations such as Zomi Reunification

Organisation (ZORO) and Hmar Peoples Convention (HPC) have been working for causes which could lead to separatism; and need to be watched carefully. Further, there are certain minorities such as Chakmas, Pavis, Lakhers who allege neglect and discrimination. Otherwise, the Mizos generally constitute a single tribe, are more educated and clearly expressed themselves in favour of peace and development.

(To be concluded)

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The Image of the Armed Forces

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

Introduction

On 12 November 1997, a Panel Discussion on 'The Image of the Armed Forces' was held at the USI under the chairmanship of Lt Gen A M Vohra (PVSM) Retd. Lt Gen RN Mahajan, PVSM, AVSM (Retd), Vice Admiral IJ Bedi, PVSM, AVSM (Retd) and Air Marshal DS Sabhikhi, AVSM (Retd) were the panelists. As the subject is important and of considerable interest, this report is being published in the journal, so that the members of the USI have an opportunity to give it some thought.

The Chairman's Opening Remarks

In a recent opinion poll regarding public's image of various professions, the Armed Forces scored high and were considered most respected and least corruptable. It is conceded that the personnel in the Armed Forces have, from the very beginning of their careers, as recruits or cadets, a thought out and seriously conducted training schedule and this process continues throughout their service. Apart from proficiency in professional subjects, viz professionalism, this training inculcates discipline, a sense of urgency and builds character.

Service in the Armed Forces takes us to all parts of our large and diverse country from Kashmir to Kanyakumari and from Jaisalmer to Jorhat and makes us feel one with all castes and creeds. The base for this feeling is provided to us in our units and formations. Many units have a mixed class composition and units of Arms and Services in the formation give us exposure to our countrymen from all parts of the country. Thus the Armed Forces serve the cause of integration and are recognised as an important factor in keeping India together.

Lt Gen A M Vohra is a former Vice Chief of the Army Staff and a well known defence analyst on national security issues.

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I would recommend that at this panel discussion we bear in mind this constructive approach in considering the question of the 'Image of the Armed Forces'.

There is a direct connection between the image and the ethos of the Armed Forces. The parchment of Commission that an officer receives from the President reads. "I, reposing special trust and confidence in your fidelity, courage and good conduct appoint you ...". It goes on to charge the officer to "carefully and diligently discharge your duty... and to obey such directions... that you shall receive... and observe such rules, regulations, orders ...". The core values that emerge from the "Parchment" are courage, fidelity, which is faithful performance of duty, good conduct and discipline. Other values follow from tradition and the ways of life or the style of functioning in Armed Forces: loyalty, which works both ways to subordinates and superiors, initiative, cooperation and a sense of urgency; of getting on with the job, of not letting the grass grow under one's feet.

Leadership is of the essence in the Armed Forces and calls for moral courage, integrity, loyalty, accessibility and professional knowledge. Please note the order in which these attributes have been listed. Let me, however, state that although I mention professional knowledge last, without it, leadership is ineffective.

From the point of view of a sense of purpose, there are few professions which equal the Armed Forces. The parchment of commission, the attestation parade, the regimental battle cries, are all an inspiration of Service to the motherland.

To my mind the important point for us to consider is how can we preserve and enhance our faith and commitment to our ethos in the prevailing environment. A serious danger is the atmosphere of servility and sycophancy that prevails in our society. This menace curbs initiative, stifles leadership and makes a mockery of loyalty. The most important stage to meet this threat is within units and the most important character is the Commanding Officer. It is at the impressionable age of young and middle peace officers that the correct attitudes can be stressed by the Commanding Officer by his being accessible, permitting a discus-

sion stage before the orders stage. The higher a commander, the more inputs he needs. It is by giving his subordinates an opportunity to express their views that he feels the pulse of his command. The distinction between the discussion stage and the orders stage should not be allowed to be blurred. Once orders are given these would be carried out implicitly.

Another pertinent aspect is the conditions and circumstances of service. The downsizing of the Armed Forces in the warrant of precedence, and the keeping of the Service Headquarters out of higher control of defence by not integrating them with the MOD (Ministry of Defence) are two important points in this regard. The circumstances of seperation from families and children's education are two major considerations that need to be borne in mind. The shortfall in the officer intake, the attitudinal change of the modern youth, the question of stagnation due to the pyramidal rank structure, the lack of a full career in that the majority of officers and other ranks retire at the age of 52 and 37 respectively are issues that need to be examined seriously. Whereas the three Services have taken several "in house" steps to improve the lot of the Armed Forces, such as cooperative housing and insurance cum medical care schemes (and they need to investigate further possibilities), the Government has to become alive to its responsibilities also particularly in regard to providing full careers by lateral movement schemes, integrating Service Headquarters into the MOD, improving the status of service personnel and above all, not relegating "defence" to a matter to be thought about in circumstances of crises only.

Salient Features of Presentation by Lt Gen R N Mahajan

The events of the last 50 years underscore the onerous responsibilities of our Armed Forces. Repeatedly they have been called upon to defend the country, put down insurgencies and provide aid to civil power. Even a cursory examination of external threats and the internal situation indicates that our country will continue to lean heavily on the Armed Forces to undertake similar tasks in the foreseeable future. To remain effective, they should have a good image and a career in them made attractive and

satisfying. Only then can the services' qualitative and quantitative requirements of manpower be met.

Since 1972, after the Armed Forces gave India its first decisive military victory, their fortunes have been in gradual decline. The process certainly got accelerated in the 80's and 90's when the country saw rapid industrialisation and then liberalisation and globalisation of the economy. Ironically, during this period as the country's prosperty and revenues grew, the defence allocations dwindled; also a career in the Armed Forces became less attractive. Simultaneously during this period, the political leadership got progressively discredited due to its opportunistic and corrupt ways.

Coincidentally, it was during this period that the Armed Forces, principally the Army, got heavily involved in Low Intensity Conflict (LIC) and counter-insurgency operations. Some of these operations concluded albeit not very satisfactorily, others are continuing and more are on the horizon. Concurrently, the Army continued to be deployed on the Line of Control (LOC) in the North and on the International Border (IB) in the East as it has been for a few decades.

As far as the Armed Forces are concerned, a historic parallel to the present turbulent period can be found in the decade plus commencing 1960 and ending in 1971. That period saw operations in Goa, the politico-military debacle against China, two wars with Pakistan and extensive counter-insurgency operations in the East. The rout of Pakistan Forces in what is now Bangladesh made the political leadership, the Armed Forces and the public euphoric. The military man walked tall. Unfortunately, no such happy ending of the present difficult period is in sight in the near term.

In the meantime, the dynamics of democracy, reforms, education, industrialisation, liberalisation and the resultant cult of consumerism have brought about profound changes in the society, its values and aspirations as also in the opportunities available in the job market. They have initially effected most the

middle class and the landed gentry - the traditional erstwhile sources from which the military drew its officers. When the economic benefits of these changes percolate to the lower urban class and the farming community, problems of intake of the right kind into the rank and file are likely to extenuate.

Despite declared intentions, we still do not have an organisation to study national strategic issues and formulate national goals and vital interests, threat to them, strategy and force levels, and continuously update them. Thus, policies that give direction to force development remain highly subjective and obscure. This naturally effects priorities and allocations. Come budget time every year, some noise is made in this regard. In the event, however, the Armed Forces make do with what is given. Vainly it is averred that their fortunes will improve in the subsequent year.

Over the last five decades, it has been established that the Armed Forces do not have any direct say in the compensation they receive. Other services in the Government, by sly lobbying and cannily - timed agitation, obtain concessions that they feel are their due. However, every pay commission leaves the Armed Forces feeling deprived and disillusioned.

In counter-insurgency operations, the forces operate in full media glare. The media seem to highlight only their transgressions; seldom their efforts and headaches. The media portrays the military as an expensive luxury; it is not modern; it must be made leaner, meaner and hi-tech; it habitually violates human rights; it underpays its personnel and retires them at a very young age; ex-servicemen are a deprived, uncared for and agitating lot; its senior officers are powerless and self-serving; service in it has lost its allure; and the country's youth does not want a career in it.

What is the military's self image? The junior ranks see themselves as unproductively employed, their labours and privations unappreciated and inadequately compensated and their status in the society and in the Government continuously eroded. Unable

to voice their agitation, they blame their senior officers whom they view as removed from reality, as also impotent to fight for them and the Services. Curtailment of military career at a relatively young age generates anxieties. The senior lot, on the other hand, concede that the system makes them helpless and blame their forebears for having handed over all powers to the bureaucrat.

What about the perceptions of others regarding the Armed Forces? The politician feels that whatever his decision, the General, the Admiral or the Air Marshal always acquiesces. He postulates that except in 1962 - not their fault entirely - the Armed Forces have always delivered. They are there. He takes them for granted.

The bureaucrat, trained to rule - the military officer is trained to serve - takes every opportunity to control the military. He flaunts his academic brilliance, broader outlook, exclusiveness, versatility, indispensability and direct access to the politician. He perceives the military officers as semi-literate, having little grasp of the wider issues, shackled in their peculiar code of conduct, pliable and easily stymied.

Fortunately the public, from whom the soldier, sailor and airman are drawn, is more generous. It perceives the Armed Forces as possessing a high degree of integrity and professionalism on whom it can depend through thick and thin. It has genuine affection for the Armed Forces but it still reckons that it is not an attractive enough career.

Paradoxically, the senior officer despite frequently deriding the low quality, especially of officers, lauds their performance in the field. It is perhaps significant that while leading troops, the junior officer draws heavily on regimental and service traditions and is motivated by them. The same cannot be said of his conduct and performance when he is not with troops.

While government intercession is a must to improve matters, numerous "in house" measures can be examined which will improve the serviceman's self-image, make his career more

attractive and alleviate the problems of ex-serviceman. Group insurance and housing schemes have demonstrated that the services can generate the resources and have the expertise to manage multi-crore and multi-dimentional projects. However, since the mid 70's, when the aforementioned schemes were conceived, no further initiatives of that scale have been undertaken. In many countries ex-servicemen have created a political constituency; they also continue to contribute positively to the development of the Services in numerous ways. This is not the case with our ex-servicemen.

Overall, it appears that the hierarchies, civil and military, prefer continuity with only cosmetic changes and not reform.

In this rather dismal milieu, how can the image of the Armed Forces be refurbished and a career in them made more attractive and satisfying? This is the key question.

Salient Features of the Presentation by Vice Admiral I J Bedi

Let me start by analysing the word 'Image'. The meaning which surfaces immediately is the "mirror" image as obtained from a perfect reflecting surface in a clear medium. But the more appropriate description for a discussion would be "a representation in the imagination". In either case, for the image of any object to be pleasant the "real thing" has to strive to develop presentable features, the medium in which the image is being viewed has to be "unpolluted" and the viewer has to be careful that any preconceived notions that he may have about that subject do not distort the image. To summarise, three elements to any image are – "the object", "the medium" and "the viewer".

Let me take the "object" first. Have we, as an organisation, taken pains to develop more "viewer friendly" features? No doubt that we, in the Armed Forces, and our countrymen are proud of our achievements in the wars that independent India has fought, and our people are appreciative of the hazards and the hardships faced by those guarding our borders or tackling insurgencies. Recent opinion polls tell us that they are conscious of our profes-

sionalism, and dedication and devotion to duty. Our countrymen give us high marks for upholding the desired value system. Please compare this with the conclusion reached through another opinion poll which indicated that 84 per cent people think that politicians are responsible for communal tension and violence, almost 46 per cent believe that politicians are dishonest and as much as 81 per cent believe that corruption is eroding all organisations to a greater or a lesser degree.

Whilst it is heartening to know that our countrymen have quite a favourable image of the men in uniform, I still feel concerned because a substantial number of them have very strange notions of what we do in the long stretches of time between the wars. Since they are seldom close to our 'core' activities - represented by gruelling-hours of peace time training and battle exercises, they form their image of the Armed Forces through their association with our peripheral activities and their experiences during commercial or social interaction with the men in uniform. It is here that the picture that emerges is not always flattering and there is a tendency at "stereotyping" the "fauji". In recent months the Army has mounted a campaign in the print and electronic media to project the right image. These advertisements are geared to emphasise the technological challenges, personality development programmes, opportunities for adventure and the quality of life in the Services. These may or may not get the Army the needed number of candidates of the desired quality but these shall help to some extent, to dissolve that "stereotype" image of the men in uniform.

The question may well be asked whether our political leadership, who are responsible for upholding the status of the institution of the state, have devoted much time and consideration to see that the profession of arms is popularised amongst our people. Benign aloofness may be the answer. Perhaps their attitudes were conditioned by their approach to the issue of war and peace during the most part of this century; earlier during the freedom struggle and later in the 50 years since independence. I need hardly stress the point that objectives of our foreign and defence policies, born out of our centuries old civilisation and, in current

times, the fruitful results achieved during our freedom struggle, have been the presentation of world peace and enlargement of human freedom through peaceful action. It is important to recall at this stage that Mahatma Gandhi practiced and preached non-violence-not as a passive submission to evil but as an active and positive instrument of peaceful solutions to international differences. Out of these emerged the ideas of 'Panchsheel' or 'peaceful coexistence' and strong emphasis on choosing the right means. To paraphrase Clausewitz, "Not war but non-violent non-cooperative action became our continuation of policy by other means".

We would be right, I think, to assume that these ideas and extortions generally shaped the approach of our post independence political leadership to defence issues and continue to govern their thought and action even today. I can be quite categorical in stating that the status of men in uniform within our society is unlikely to improve, and Services shall continue to be deficient of quality manpower unless our leadership changes its orientation and begins to believe that "military muscle" is a vital necessity if we are to make India count - whether to take a seat as permanent member of the Security Council or as one of the poles in the likely multi-polar world of the early Twenty First Century. The Services on their part shall have to emphasise professionalism so that they are held in awe by adversaries but more importantly because it shall help in increasing their visibility and have status within the country.

There was another aspect of the attitude of our freedom fighters to the Indian Armed Forces of that time. The All India Congress Committee (AICC) as part of their resolution in response to Cripps Mission of 1942 had stated that "The Present Indian Army is an off-shoot of the British Army and has been maintained till now mainly to hold India in subjugation. It has been completely segregated from the general population who in no sense regard it as their own." Today, as we consider the 'Image of the Armed Forces' we must reflect on the extent to which we are still segregated from the general population through omission if not by design.

During my eight years of interaction as Flag Officer in Command with various civil authorities - both at the bureaucratic and political level, it was my distinct impression that they were appreciative of the professionalism with which we discharged our responsibilities but they displayed only superficial interest in matters, military and seemed quite content to let the 'defence' keep busy with their activities within their cantonements, their bases and establishments. There was no dearth of platitudes and expression of sympathy whenever any issue was taken to them for resolution. Beyond that it was seldom considered necessary by them to display any deeper interest or take any initiative to build up the popularity and esteem of the Services within their community.

Let me now take up the second element of what generates an image, namely the medium, the environment within which an image is formed and sustained. The corruption and criminalisation in society has substantially altered the value system of the personnel joining the Armed Forces. The conflict of contrasting values - self interest versus principles enshrined in our Service Academies motto of "Service before self" - has to be faced by us throughout our lives. At the National Defence Academy (NDA) and at the Naval Academy I had ample opportunity to interact with the young cadets. Influenced as they were by the prevailing value system in society, it was no surprise to me that their action and responses were conditioned by what they considered to be best in their "self-interest". It was the duty of the officers and the staff at those academies to attempt to turn this around. The fact that most of them are in their late teens or early twenties; they are still willing to learn from other's experiences and alter their value system. But their inquisitive and questioning nature, whilst oberving the world outside in today's information - rich environment, must certainly lead to a conflict in their minds. For those officers in our Academies, who are responsible for moulding these young men, it would remain a never ending battle since a few hundred of these questioning but confident minds join the Services every six months. We must succeed in our endeavours to build up the correct value system in them whilst accepting that quite a few would remain ambivalent. The medium through which

these few, and others like them in the world outside view the profession of arms, is too polluted to be cleared. As far the third element, the 'Viewer' there appears to be no immediate cleaning up. It is here that the country faces the maximum challenge.

To conclude it is my belief that for the image of the Armed Forces to be sharp, clear and pleasant, our political leadership have to rethink their ideas about the role of power 'in international relations', and we in the Services have to make efforts to remove the 'stereotype' image of the military man.

Salient Features of the Presentation by Air Mshl D S Sabhiki

The structures created after the Second World War and during the Cold War have been eroded or are in the process of erosion. Geopolitic and geostrategic considerations have taken back seat and geoeconomic is the dominant factor. Historically, in 6000 years of heritage and in 2000 years of recorded history, we had three golden eras - those of kings Ashoka, Gupta and Akbar. We did produce some great warriors like Rana Pratap, Shivaji, Tipu Sultan but nobody ventured beyond the national borders except in Maharaja Ranjit Singh's time. In short, we have never produced leaders like Alexander the Great or Napoleon.

Today, India has to spend large sums of money to import the hardware, as India's Research and Development which was created in the fifties, has not produced any worthwhile fighter transport aircraft or Advanced Light Helicopter or Main Battle Tank or ship. Though we have a reasonable capability in the field of missiles and supposed to have nuclear capability, yet there is no organisation on the ground to utilise this nuclear capability. India must have nuclear strike capability considering the two neighbours/ adversaries, China and Pakistan, are improving their nuclear strike capabilities.

Understanding between the political leadership and the Armed Forces at the higher level is a must. As it is India's foreign and defence policies are far removed from inherent relationship between international politics, military might and economic strength.

Twenty six years of peace has given a false sense of security to our politicians resulting in utter neglect of our Defence Forces. This has resulted in not a single member of Armed Forces being nominated to the current Rajya Sabha. There was no Service representation on the recent Pay Commission.

The award of the Fifth Pay Commission has further adversely affected the morale of the Armed Forces. There is a shortage of 16,000 officers in the Armed Forces and the bright and shining youngsters do not join the Armed Forces, because the terms and conditions have been deteriorating all the time since independence. The three cadre reviews might have given more higher posts but at the expense of operational and fighting efficiency.

The plight of ex Servicemen needs definite improvement especially in resettlement, health care and pensionary benefits.

We must ensure that Armed Forces have a definite say in higher planning. The National Security Council has been talked about but has not been established.

DISCUSSION POINTS

Observations by Lt Gen A M Sethna

Lt Gen AM Sethna made some observations with regard to the projection of the image of the Armed Forces. He expressed the view that the standard Public Relations methodology is ineffective and often counter productive because of the following factors :-

(a) Service projection is often based on narrow one point agenda viz recruiting, or psy - warfare, or refurbishing an image at a particular juncture which appears to have taken a battering viz human rights abuse. Gross distortion of facts especially on the last named need firm, quick and vigorous rebuttal, with equal space given as that to the allegations made.

(b) Public perception of the Services is generally that of a "Heroic Image". Public is often influenced by the very large

Extended-Service- Family, which is now spread throughout the country. Continuous information at different levels on the functioning and requirements of the Services is required.

(c) Resource constraints, but even more than that apathy on the part of the highest in the political hierarchy for many years are difficult to be highlighted. Sudden spurts of finance made available for say the Sukhoi purchase catch the public imagination blurring the fact of long years of neglect over wide fields.

He stated that the problems of the three Services in image projection vary. The Army's problems are the greatest not only because of its size but also because of some of the following factors :-

(a) It's far greater contact with the public specially in the current conditions of the low intensity warfare.

(b) The problems emanating from Operations *Blue Star* and *Pawan* which political parties have used to their advantage.

(c) *Operation Rakshak* in the Punjab, Jammu and Kashmir and the Army's current role in the North-East are other areas which make it a target of disparate groups viz human rights activists, environmental groups and so on.

The public admires, often tacitly, the disciplined organisational culture of the Services - their cohesion, the well organised living conditions in cantonments and the high standards in their instructional establishments. This is often tinged with envy, and individual transgressions in manner and conduct are often highlighted out of proportion. Certain behaviourly patterns viz too much being made of local dignitaries, high handedness in dealing with traffic regulations, unruly behaviour in public places etc, also lead to adverse imaging. The recent display on the Republic Day and Beating the Retreat, of the three Services Chiefs arriving under heavy escort to venues already well sensitised has evoked adverse comment which could well be avoided.

He recommended the following measures :-

(a) The three Services need to take their own imaging as a Command responsibility in the same way that they take Morale as a Command responsibility. This will require a different mind set from what is today considered as a somewhat peripheral task and a change from the current fragmented approach of dealing with the subject.

(b) The projection of the image has to be at various of levels, from unit and sub-unit upwards, the best projection being of a benevolent helpful neighbouring organisation but not to be overwhelmed by its environments. It has to be clearly understood that imaging is not synonymous with projection is the media by the highest headquarters but creating a role model at all levels with which our country men can interact. Commanders at all levels need training in the subject and be sensitized to local nuances of time and place for correct action to be taken, proactively and not as a reaction to unfolding events.

(c) The image cannot exist without the reality of a sound, capable and disciplined Force which realises its changing role in changing times. Possibly the first and most important target in imaging are the Services themselves and their extended family including ex-servicemen. Only then will the Service get the empathy of the public and support from Government in a democratic set up where for many decades a belief has been created about the dichotomy between "Development and Defence".

(d) He concluded that image building is important, but even more important is the cohesion, discipline and effectiveness of the Services which alone can be the basis on which an image can be built.

General Discussion

In the discussion that followed, a number of relevant issues were raised. These need to be highlighted to recommend constructive action by the authorities.

(a) If the image of the Armed Forces is high, why is there a shortage of officers? Why does the profession not attract the right type of youth which would ensure a higher percentage of selection by the Boards.

(b) The image is high but it seems that this is not matched by the respect for the Services. The politicians take the military for granted. The bureaucrats look down upon them and jealously guard all decision making as their prerogative and have succeeded in keeping Service Headquarters from being integrated into the Ministry of Defence. The Media highlight transgressions. Reporting is superficial. There is no indepth study; no attempt to understand the difficulties and special factors are ignored.

(c) The youth does not seem to attach much importance to the image. Apart from the hard life in the Services, the poor prospects (only 0.6 per cent become General Officers as against 39 per cent reaching the level of Joint Secretary and above in the IAS) and denial of a full career are aspects that detract them.

(d) Within the Services, there is a general feeling that a person is not getting his due. What a Major or a Lt Colonel did in the old days is now done by a Colonel or a Brigadier. The attempts to increase higher ranks by cadre reviews have not been a success. It has lowered the prestige of rank and has not solved the problems of poor prospects, poor emoluments and early retirement.

(e) The politicians are guided purely by the bureaucrats as they lack understanding and do not find the time from their political preoccupation with their constituencies to get to know the fundamental issues.

(f) The military need to build influence and harness a lobby of ex-servicemen who have a 'voice' in the rural areas.

(g) There is no future in the Armed Forces. Their role is not

understood and the senior brass is unable to do anything as they have no clout in an environment of bureaucrat guided and controlled politicians.

Conclusion

The above observations, some of which were repetitive, have been collated from the questions raised by a number of members of the USI who were present at the Panel discussion and can be considered on two planes. The first deals with attracting the right type of officer material in sufficient numbers and ensuring the retention of the ethos of the Armed Forces so that the favourable image continues to be lived upto. The second plane is that of making the Armed Forces contented vis a vis organisational issues, higher control and conditions of service.

The educational system in the country needs to be supplemented by national service in order to build character of the youth and to imbue in them a spirit of service to the nation. The NCC does this for a small number. Others could be required to work in rural areas for a specified time, in the educational field, for instance. With this, or other character building measures, the right type of youth-outdoor type, looking for independence of action, would be drawn to the Armed Forces.

Such youth would acquire the ethos of the Services with pride and be conscious of maintaining the image by their performance. If the politician, the bureaucrat and the media show recognition of the Services as a profession and the Services get their rightful place in the scheme of things, the number of youth opting for a career in the Armed Forces will increase. Another essential step is to improve career prospects and emoluments, not by cadre reviews but by lateral movement. (Lt Gen ML Chibber's book; *National Service for Defence, Development and National Integration of India,* goes into the aspects mentioned in this paragraph at length and suggests solutions that the Government would be well advised to implement).

In regard to making the Services contented, (as also to ensure appropriate strategic and defence policies for the country) organisational steps are required to ensure timely strategic evolution (National Security Council), enunciation of the country's defence policy and appropriate higher control and coordination and integrated planning (Chief of Defence Staff and Theatre Commanders system). If these institutional arrangements are implemented, professional fulfilment will be achieved.

While pressing for the measures outlined above, Service Headquarters should continue to take in house steps to ensure that the image is maintained and improved upon by their performance as well as academic attention to these matters at their training establishments and at all levels of training in units and formations. Above all the commanding officers need to ensure that within their units, the aspect of the ethos and image is never lost sight of.

There is also an urgent need to ensure a clear perspective of the role of and attitude to military power among our political leaders in the present changed geopolitical environment albeit in combination with economic power. This and a better understanding of matters military as also indifference to security issue can be addressed by creating opportunities for interaction between the Services and political leaders; in particular Members of Parliament. The USI can play an important role in this context even if its efforts so far have not had an encouraging response.

Trans-national Threats to International Peace and Security–Terrorism and Drug Trafficking

AIR MARSHAL K D CHADHA, PVSM, AVSM (RETD)

Introduction

The biggest threat that states face today, undoubtedly is terrorism which as one author put it, "is widespread geographically and diverse ideologically". Terrorism has come to be an alternative to war amongst adversarial states because the latter has become too expensive and its outcome is unpredictable; there is of course a tendency to club terms like extremism, insurgency, militancy and terrorism under the same head but each one of these has its own distinctive connotation and hence each needs to be viewed in the correct perspective. For instance, an extremist is a person who advocates extreme measures specially in politics. Insurgency is a revolt against civil authority or a government in power and a member of a political party who revolts against its leadership is also an insurgent. Militancy was a term ascribed to a group of political activists on the extreme left of the British Labour Party who were aggressive and combative. Terrorism however does stand apart as, according to a US military definition, it represents "premeditated politically motivated violence against non-combatant targets by clandestine forces"; and of course these acts are aided and abetted by hostile forces of inimical neighbours as also by nefarious forces operating globally. The threat is multicountry and multination and hence its menacing aspect to international peace and security.

Origin of the Term Terrorism

It is somewhat ironic that the term terrorism came into vogue

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in international parlance from the National Liberation Movements against racism and colonialism in Africa and Vietnam. These movements were perceived by the West, especially the US during the Cold War, as Communist supported and hence the broad label of these being terrorist was affixed. The dilemma faced by pluralist systems is, that these do provide legal and constitutional frameworks for redressal of political, economic and social grievances and yet there is resort to extra constitutional criminal activity. Italy, Germany and Japan faced terrorist activity in the 1970s and 1980s, but this was a fall out from the anarchic ideology that a society should exist without a government and the state was an evil which had to be abolished as it represented the preversity of power. Of course, anarchy and disruptive acts will always hold an attraction for those who feel that they are badly governed and where ruling cliques subvert the state for personal benefit. Cumulative neglect is certainly the underlying cause of terrorism and once the conditions are ripe all sorts of external forces will attempt to take advantage of such conditions. It is a matter of debate whether foreign support causes terrorism or foreign support acts as a facilitatior once terrorism takes roots.

Trans-national Terrorism

Trans-national terrorist activities are today bedevilling many countries because of a feeling that resolution of their internal social, economic and political problems can be achieved either by eliciting support from outside or in certain cases by committing terrorist acts in Western countries. The UN General Assembly in Oct 1970 passed a resolution "that every state had the duty to refrain from organising assisting or participating in acts of civil strife or terrorist acts in any other state or acqueising in organised activities within its territory directed towards commissioning of such acts". Despite such a categorical definition of international terrorism and UN disapproval of such acts, there have been no UN sanctions against offending states, except for unilateral punitive action by the US against Libya and Iran on what it perceived as terrorist excesses.

Since effective action against international terrorism has not

been possible through the aegis of the UN, affected states have been forced to evolve appropriate measures to contend with the challenges. These methods often have been questioned by Human Rights groups, in certain cases perhaps rightly so, but to give credence to canards spread by terrorist groups, who themselves are responsible for some of the most heinous acts, is sheer hypocrisy.

Resurgent Islam and Trans-national Terrorism

Conflicts in and between nations, without doubt, stem from ethnic, cultural, linguistic and religious divergences. Of the 180 or so countries across the globe only 20 are nationally homogenous. So internal tensions are intrinsic in such a delineation. While all religions have their chauvinists, it is resurgent Islam which somehow appears to be in the forefront of terrorism. Some argue that problems stem from different cultures meeting face to face through media technologies. Of course there is a secular version of Islam but the vast majority of Muslims believe that they can be Muslims only if they live in an Islamic state. The basic question is, can a theocratic state be really democratic? It is the self perception that true believers have a God given right to promote the historical relevance of a religion that is behind much of present day trans-national terrorism. In fact Islamist fundamentalist are hypothesising that with the end of the Cold War, secularism in Islamic countries is giving way to their brand of Islam and are presenting themselves as an alternative to westernised rulers. It is, therefore, not surprising that Islamic countries like Egypt, Algeria, Pakistan and Saudi Arabia are all casualties of transnational terrorism. The problem is that none of these countries are mature democracies and hence the predicament of offsetting the monopoly of wisdom arrogated by obscurants whose emotions often get the better of reason.

Pakistans Role in Trans-national Terrorism

Any discussion on trans-national terrorism, specially in the Indian context, would be incomplete without mention of Pakistan's role in promoting trans border terrorism on Indian soil. It is

true that turbulence in Punjab and Kashmir was a consequence of Indian economic, social and political failures but Pakistan had no right to deliberately fish in troubled waters to exacerbate conditions. Further Pakistan's terrorists belligerence was not only directed against India but had tentacles in several Islamic countries like Algeria, Egypt, Tajikistan, and even Xinjiang province of China, which continue to witness terrorist violence from Islamic cadres trained in Pakistan.

A Congressional Report to the US House of Representatives by the Task Force of the Republican Research Committee presented in February 1993 stated that "there was an active ISI programme of using the institution and infrastructure created for operations against the Soviets in Afghanistan to devise Islamist violence in Kashmir and terrorism in Punjab. Specialist training was imparted by subversion specialists, from Sudan, Libya, Iran and Pakistan. The weapons and materials provided to militants operating in Kashmir were identical to those provided by the ISI to Mujahideen in Afghanistan. In fact a global Islamic cause for Jihad against Indian infidels was espoused."

Export of terrorism by Pakistan, according to one assessment became necessary to find a task for the Mujahideens who were becoming restless and unmanageable. Pakistan also needed an external challenge for its domestic compulsions. The foray against India gave ISI a role and the military a reason for not interfering in politics. What is particularly ominous about Pakistan's infringement in Kashmir is that it is making irredentist claims on what it considers is the unfinished business of partition and which can neither be backed by fact nor history. In fact the stance is akin to re-vancluism of 18th and 19th century Europe, which was the cause of unending strife leading to World Wars.

It is perhaps now clear to Pakistan, that by keeping the level of violence in Kashmir to a threshold where it does not lead to a full scale exchange, it has failed to achieve the dividends it expected. However, the seeds of a full war remain. There has to be mutual accommodation, for a war in the sub-continent would be an unmitigated disaster and can be least afforded by India

and Pakistan given the magnitude of their economic, social and political problems. Externalisation of internal problems can boomerang and such a danger should persuade Pakistan that its agenda refits a change.

Narcotics and Arms in Trans-national Terrorism

The role of narcotics and illegal arms is perhaps best documented by a CIA study titled 'Heroin in Pakistan'. The study narrates how ISI allowed Afghan Resistance Groups to trade in narcotics after the cut off of US assistance. The study reveals that individual ISI officers also participated in the trade, and terrorists pushed into India, were partly if not wholly, funded through narcotics. That activities of narcotic gangs and clandestine arms deals through covert support by various intelligence agencies was causing international concern, is manifest from a UN Report in 1987 which linked international terrorism to illegal drug production and trafficking and illegal arms trade.

Improved technology in communications, arms and explosives has facilitated the functioning of the terrorist groups. It has afforded them a great degree of mobility and drugs provide the quickest and easiest means to fund their activities. In fact there is a vast underworld fed by hostile intelligence agencies, which links criminals involved in narcotics and money launderings and illegal arms dealers, into a sinister web. One author has said that smugglers feed terrorist violence at one end and illegal arms dealers at the other. The arms drop at Purulia suggests that today weapons routes criss cross over entire continents.

There is also strong evidence that in every area of terrorist violence, surrendered militants not only take to crime and arms smuggling, but also know the routes through which drugs can be pushed. Now that the unemployed of the KGB, have also joined the act, the scenario of drugs and arms nexus has become even more ominous.

To counter the menace of narco-terrorism the problem has to be viewed in a global dimension, and it is only through con-

certed joint action that one can foresee any redemption. Ultimately the problem of drugs can only be resolved if western nations can educate and convince their populace not only about its evils, but the havoc that drug peddling is wreaking all over the world. For so long as there is a demand, there will be a supply, as also narcotics - arms-terrorist nexus.

Economic, Social and Cultural Factors

An aspect that does not receive the attention that it should, is the socio-economic factor which gives a fillip to fundamentalist movements. Today large segments of population in developing countries, are being marginalised not just because of poverty and corruption, but by the globalisation of world economies. Globalisation in such countries provides only a small number of jobs with relatively high wages to the privileged few, leaving a large pool of young educated, skilled and talented individuals isolated, and who feel beleaguered and unwanted. It is these rejects is Islamic and other developing countries who have no qualms on joining the globalised under world economy which constitutes the illegal narcotics and arms nexus feeding terrorism all over the world. Being highly excitable, these recruits are also the most determined zealots. The disintegration of local economies so as to integrate with the global system, has in no small measure contributed to trans-national terrorism.

Gunnar Mydral, the Swedish social scientist had drawn attention to the incongruity that globalisation has generated today, way back in the 60s through his monumental work *The Asian Drama*. He averred that Westernised intellectuals and ruling elites in practically all developing countries, more often than not, tended to project a lure of western ideas, life styles and values. The masses were however, unable to follow their leaders in their western ways and thus lost the dynamic development element in their cultures, which in turn led to stagnation and decline. It is the deprivation of the social and cultural content which finds expression in alienation and revolt.

The National Institute of Advanced Studies, Chandigarh,

recently studied people involved in terrorist violence and found that though the individuals were empathetic and socially conscious, they were angry at socio-political distortions which made them believe that they were in a no win situation and hence the motivation for violence.

Societies today have rendered themselves vulnerable to terrorism because of cumulative default and neglect. In attempting to contend with the challenge of terrorism, regimes, apart from physical control of such activities, need to address socio-political, socio-economic and socio-cultural aspects which are the real underlying causes for disaffection. The battle, essentially has to be for the hearts and minds of the people.

Conclusion

Religious intolerance, ethnic and cultural divergences appear to be the primary causes of trans-national terrorism. Belinsky, a Russian literary critic of the Nineteenth Century said that it is a critic's business to be the 'tutor of society'. And he went on to write "I can't keep silent when lies and immorality are prescribed as truth and virtue under cover of religion and under the protection of the whip. The salvation of mankind lies in civilisation, education and humanity; it needs neither semons nor prayer but the awakening of a feeling of human dignity in the people."

The high preists of globalisation and the obscurants may yet get awakened by Martin Luther's famous incantation that "he was shaken by desperation and the blasphemy of God".

National Perspective on Information War

MAJ GEN YASHWANT DEVA, AVSM (RETD)

Introduction

Information War (Info-war) is a burning topic, its precepts purport, raving controversy and its practice, smack in the eye of the storm. While the theoreticians of the defence establishment grapple with its definition and scope within the gambit of existing strategic doctrine, the futurologists and practitioners of information technology (IT) see in it a new form of conflict and conflict resolution, apropos emergence of the third wave civilization. The two approaches present a paradox. Paradox, to the cognoscenti, is the concurrent holding of two seemingly incongruous perceptions, not only such that both are true, but that the two together express a more veracious and well-founded truth than either could have done on its own. The paper hypothesizes validity of both viewpoints, despite doctrinaire difference. It suggests that IT has thrown up new challenges, both, in its exploitation to beset the enemy on the battlefield, and in its wider role, to protect information systems critical to the functioning of the society. It vigorously recommends that India needs to formulate a national perspective, and not just have an add-on to its strategic doctrine.

There is a close link between the national perspective on info-war and the emerging world information order. The architects and mentors of the latter are no different than the political and economic world order, of which we have been, continually, hostage of. India was not part of the world political order, having been denied a seat in the Security Council and because of its neutral credentials. It did not see merit in joining economic blocks, a decision, it later rued. When India sought a place under the

Edited text of the Essay which won the First Prize in Group A of the USI Gold Medal Competition 1997.

sun, it was spurned; its belated presence in the corridors of ASEAN notwithstanding. If position jockeying and suave bullying in World Trade Organization (WTO), World Intellectual Property Organization (WIPO), International Telecommunication Union (ITU), International Standards Organization (ISO) and International Electrotechnology Commission (IEC) are any indicators, we may as yet find ourselves at the wrong end of the info-bludgeon, that the power brokers will inevitably wield. We are on the hit list of the counter proliferation, export control and technology denial regimes,[1] because of our refusal to sign the Nuclear Nonproliferation Treaty (NPT), Comprehensive Test Ban Treaty (CTBT) and now the proposed treaty on control of fissile material.

India cannot, but be a part of the emerging world info-order. It can neither isolate itself, nor can get ostracized. It is this imperative that prompts us to promote establishment of National Information Infrastructure (NII) and to integrate it to the Global Information Infrastructure (GII) with all the attendant security liabilities, that this would hazard. Fortunately, we have no Doubting Toms amongst us as to the concept and motive of information infrastructure. Like economic reforms, it has wide, if not universal acceptability, cutting across the ideological divide. However, the approach brooks divergence of views; vital concerns being infringement of sovereignty, deleterious impact on national security, information apartheid, dumping of dated technologies and adverse social and cultural influences.

India may be engulfed in a global or regional electrotechnology-driven conflict with no holds barred. It may involve assault on civil information networks, independent of or in concert with violation of borders and physical attacks. This may lead to information mayhem, paralyzing the economy, the infrastructure and control mechanisms of social, political or technological systems. Of greater significance is the threat posed by non-state actors and proxies laced with hacker capabilities.

Information is a double-edged weapon. If its balance lies with the adversary, no amount of physical force can compensate it. Info-war is cheap to wage. "Unlike traditional weapon technol-

ogies, acquiring information weapons does not require vast financial resources or state sponsorship; computer expertise and access to major network may be the only prerequisites."[2]

Sovereignty

Nations go to war whenever there is violation of their sovereignty. This lietmotif is qualitative in that the sovereignty must be perceived, persuaded or connived[3] to have been violated and the provocation must be extreme. Sovereignty implies a defining sphere within which it exerts its power and that sphere is not necessarily constrained by physical borders. Multinationals and IT, *inter alia* numerous catalysts of change, have completely conflicted and mutated the previously-held perceptions of sovereignty, even questioned validity of the concept of nation state. Averring that we are witnessing the twilight of the nation state, Walter Russel Mead writes, "Nations are being overwhelmed by markets. Transnational corporations have no allegiance to any government and sail the seas of economy under no flag but their own."[4] Like multinationals, IT, too, holds a wide sway and transcends borders; wireless technology, satellites and networks having released it from the territorial bounds. IT has substituted "military overreach" with "info-overreach", thereby denying war its classic *raison d'etre.* War is no more territorial, its phenomenon explained and cogitated in geo-political rationalities.

The greatest achievement of IT is shrinking of the world. Marshall McLuhan's vision of global village is a vibrant reality, with Internet as its microcosm precursor and paradigm. Formed without a blueprint, "Internet is the network of networks", a platitude that we have voiced *ad nauseam.* Its wide reach, covering more than 130 countries; large number of users, estimated over 60 million, exponentially rising at a phenomenal rate of 10 to 15 per cent per month; deep cauldron of information with over 60,000 computer networks and 5 million document[5] files on World Wide Web (WWW or simply Web): vast computational resources for searching, storing and retrieving information and absence of a formal regulatory mechanism, suggest a transnational and an anti sovereignty bias. No one owns or runs the Internet. It is a model of Spencerian anarchism; a location-free, user environment. The

Web, a cross-border medium promenades two principles, viz, decentralization and empowerment of the individual, which together reflect its freedom from any control. "People now have the reach and access that only nation states had some years ago."[6] Attempts at imposing limited regulation even on content have failed and this is notwithstanding universal abhorrence to such nefarious influences as proliferation of pornography, gambling, fraud and extremist literature on the net.[7]

National sovereignty is a territorial concept, whereas Internet, the emerging Global Information Infrastructure (GII) or the world information order are all, metaterritorial.[8] Electronic trading on the stock market, telemedicine, transnational collaborative research, distant education, and host of other applications go beyond the familiar territorial jurisdictions and question the idea of nation state. They infringe laws, the nation states have appropriated and prided as their legitimate realm, and challenge legalities that govern ownership and flow of information. When Clinton administration tried to impose Communication Decency Act (CDA), protecting citizens against growing menace of pornography, it was blocked by a court in Philadelphia as violative of the First Amendment rights and later struck down by the Federal Court. Reflecting on the cyberporno debate, Stewart Dalzell, a district court judge remarked, "The Internet may be regarded as a never-ending world wide conversation. As the most participatory form of mass speech yet developed, the Internet deserves the highest protection from government's intrusion."[9]

The World Information Order

Two motifs that shape the new world order are economics and information. Spheres of accumulation and denial are the natural consequences, be that of economic or information wealth. Tofflers have described the paradigm of the new world order as having shifted from the "geo-economic to geo-information."[10] They have rightly called geo-economic reasoning as inadequate for two reasons, because "it is too simple and it is obsolete."[11] They argue that this logic overlooks the growing role of knowledge - including science, technology, culture, religion and values - which

is now the core resource of all advanced economies and of military effectiveness as well."[12] However, Tofflers too seem to have fallen prey to the popular misperception of the role of geography as an abiding factor and determinant of the shape of the order, be it past, existing or emerging. Territoriality is a waning influence, although admittedly, it continues to be relevant. This paper suggests that the prefix *geo* has lost its lexical validity and ought to be replaced by *info*. It is *info-politics* and info-economics which would influence the international relations and determine the taxonomy of the world order.

The second ramification of the Global Information Order (GIO) is information apartheid. Outwardly, proclaiming laudable objectives, GIO has got entangled into the quagmire of deviant issues, pitching developed against the developing countries. The new order has intensified IPR, technology denial and counter proliferation regimes. It would be naive to be dismissive of its adverse influence in perpetuating information denial and apartheid, that it would inevitably entail. There are serious concerns about the spiteful behaviour of the information-haves, as is seen through highly discriminatory regimes, created and dominated by them, and infliction of the laws on others, that have been rejected in their own countries.

The US has proposed a treaty on intellectual property at the World Intellectual Property Right (WIPO), which seeks to lay down conditions of protection of data on the basis of investment. It intrigues to convert data, generated in "public domain", as a private property, once it is registered. There is a strong lobby of publishing industry in the US, spearheading creation of an international forum to promote database monopolies, that would serve their narrow interests. Thwarted by an adverse US Supreme Court judgement, the cartel seeks *sui generis* protection for IPR; and the treaty helps creating *de novo* conditions to that end, with a view to linking it to the Berne Convention on copyrights. "It is obnoxious enough that public information should be brought under monopolies, it is worse that the system is trying to build in mechanisms for practically protecting the database in perpetuity."[13] Further, the determining criterion for protection is not the ingenu-

ity, innovation or quality of content, but the sufficiency or substantiality of the investment, "knowledge in the hands of the money bags."[14] The treaty is highly anti competitive and discriminatory. It is a rich man's club, catering only to a privileged elite, and not the knowledge seekers. "Its great disadvantage is not being able to protect one's own data, if one cannot show huge investments."[15]

No electronic commerce can be conducted without cryptography. Besides, data-encoding is also required for privacy of the individual, a guiding principle of plying information on networks that have public accessibility. In the past, US Administration proposed exportable encryption schemes such as Data Encryption Standard (DES), which would have given unfettered right to the US Government to decrypt files easily using escrow approach. In May 1997 they somewhat relented. Now there are no restrictions on a 40 bit key, which can be broken in matters of hours; for a 56 bit key the export is conditional in that licensee has to develop methods which provide the Government access to the keys; for anything more complex, the methods by which the government gains access must be in place.[16] In essence, it implies that the US government can monitor any transaction on the net. A strong encryption software, called "Pretty Good Privacy (PGP)", has been approved for export, but the authorized list of companies is restricted, and the so-called rogue countries, "Cuba, Iran, Iraq, Libya, North Korea, Sudan and Syria" are, unremittingly, embargoed.[17]

The emerging information order boasts of equity and democratic virtues, yet it smacks of information apartheid and a rich man's burden to impose a system, no less discriminatory than the world political order. It prides in "five core principles: private investment, competition, flexible regulation, open access, and universal service,"[18] but continues to be afflicted by monopolies and denial. It supports a wide range of applications, services and delivery technologies, but is chaotic, belying a commonality of approach to regulations and other contentious issues like standards, patents and IPR. Even if these are resolved, it is doubtful whether interests of the countries, belonging to the South, will be protected.

India is more vulnerable to the negative influences, since its liberal economic system is not yet fully mature and its social system is more tradition-bound than elsewhere. This, however, is not to suggest that India should abstain from the emerging GIO. Far from it. Should participation in regimes and access on the networks be self-denied, India would, incontrovertibly, be at a disadvantage. There is no virtue in isolation and we must guard against becoming a nation of "information disenfranchised".

Technology Denial

Seemingly, technology denial is a consequence of non-proliferation and a rational instrument of counter-proliferation. The countries which have been non-optees of NPT, CTBT and now the proposed treaty on control of fissile material, are the obvious targets. But there is a more sinister purpose behind the denial regimes. It is to maintain technological superiority and not allow the efforts of the fledgling economies of the South to fructify.

Access to technology is integral to an information infrastructure that we may wish to develop. In the past, Indians have been somewhat naive to the technology game that the developed world has been playing and heedlessly inward looking, even negligent of acquisition strategy. Of late, there is an increased awareness of the pressure from the technology denial regimes, however sheer apathy continues to prevail with regard to patents and IPR. This not only inhibits industry and the service sector from obtaining world-wide competitive technology, but also is a hindrance to the progression and protection of indigenous know-how.

Fear of globalization degenerating into mass proliferation of high technology at the cost of commercial and security interests of the technologically advanced countries, has led to formation of exclusive technology denial clubs and hardening of attitudes. India's credentials of voluntary abstention from spawning sensitive technologies are impeccable. Unlike China, it has neither passed on nuclear and missile technologies to friends, nor indulged in flagrant plagiarism; the opportunity and temptation, notwithstanding.

Cybercommunities, Cyberlaws, Cybercrime and Cybersecurity

A new social revolution is taking place in the form of telecommunities, audacious and unrestrained by national borders. They are not shackled by traditional beliefs and value systems. The clout of these transnational communities is derived from two sources viz, possession of information and enormity of their numbers. Because they are self-chosen, these can be a powerful instrument of social change and sensitization of public opinion. On the other hand, social perverts and terror vendors, too, have got on the bandwagon. They exercise mesmerizing influence, a savage example of which is, "Heaven's Gate".

Business and professions are setting up their own Intranets, forming close groups for conducting business in private and sharing corporate information. These monopoly groups are mushrooming. They charge for the information they hoard. Possibilities are that they would transition to transcontinental entities with shared economic interests, and would then, inexorably, develop proclivity to go beyond the pale of national laws.

The Internet has come under two contradictory pressures, one which suggests that Internet is a democratic structure and that it would be pernicious to mandate it; the other, that in the absence of a regulatory mechanism, it would go chaotic. Online pornography and hacker are issues which apparently reflect the dilemma. However, there are other complex issues which need to be addressed e.g., there is serious concern and skepticism about cyberlaws, cybertaxes, copyright protection, cyberstalking and cybersecurity.

As India becomes more dependent on information systems internally and acquires greater connectivity on the highways, externally, its vulnerability to international spies, cyber criminals, saboteurs and spoofers would increase. "Greed, treachery, revenge and fanaticism all have the same opportunity and tactics at their disposal to wreak havoc in a nation's information infrastructure."[19] Significantly, development of security measures have inexorably lagged behind the innovative ways of cyber attack. It

is ironical that whereas commercial houses, businesses, banks and financial institutions seek greater information assurance with a view to conducting electronic commerce, they are oblivious of the fact that an insecure infrastructure would present lucrative target-rich environment. It is inevitable that the defence services in India will adopt commercial technologies and when that happens, security systems would be under increased stress. It is, therefore, imperative that greater attention is paid to the defensive aspects of the info-war.

Infoterrorism and Anti-terrorist Electrotechnology

It is a sad reflection on the Indian creativity that we have not looked to finding technological answers to counter terrorism. We follow the fallacious and time-worn dicta that have led others to blunder. We may not admit it, but in our schools of instruction, we teach dated precepts on how to organize raids, create an intelligence network, conduct cordon and search, invest hideouts and cooperate with the police and para military outfits. Those subjected to police schooling are tutored to establishing a retinue of informers, "to set a thief to catch a thief" and organize encounters, genuine or otherwise. None learns about infoterrorism that is let loose; handling of media whose anti-establishment bias can be highly damaging; or for that matter, creation of data bases and electronic repositories, which every one can share, to collect, evaluate and analyze data on insurgency and militancy movements, their strengths and weaknesses. There is hardly any elbow grease to understanding electrotechnology, its role in locating and tracking the terrorists; SIGINT (Signal Intelligence) of which most undergrounds are adept at; and COMSEC (communication security), absence of which has been extremely costly, to national security.

The info-war offers countless opportunities to defeat terrorism and insurgency. For example info-isolation of head from the tail or the collaborators and fellow travellers within from the masters and mentors across the borders; info-starvation through filters and gateways; and info-saturation through overload and spin. These cybertactics have paid off elsewhere, so there is no reason

why we remain cynical of their efficacy. It does not cost much to work out a system software that automates much of the gathering, culling and analytical processes, and provides well-researched, interactive, and time-sensitive feed-ins to the troops operating on counter-insurgency missions.

Strategy of Info-war

If in World War II, psychological paralysis could be induced by movement replacing massive application of firepower[20], in future wars, it could be provoked by information, inundating the adversary with its overload or inflicting crass indigence, spin and swindle. There are examples galore to prove the point that the information and its instruments can be as potent, if not more, in benumbing the enemy to inactivity, as massive firepower and shock-inducing rapid movement. Nonetheless, a soft kill or an info-offensive cannot pull off on its own; it is the combination of soft and hard kill or force-on-force, which is deadly.

As the post industrial age begins to give way to the information age, we still find comfort in a vision of future warfare that continues to emphasize lethality and unmitigated capacity to kill with greater precision. This obsession leads us to seek weapons of mass destruction, on the one hand; and delivery systems with more range and accuracy on the other. Yet, our doctrines are stove-piped for conventional war. There is an obvious incongruity in our strategic thinking and practice, worse there is no place for information and info-war in either. Its ramifications are that "we find ourselves embracing a method of fighting that grows increasingly obsolete and more irrelevant with each passing day."[21] It is not to suggest that the military and the traditional precepts of war fighting have become malapropos to the prevailing ambience. Though the paradigm has shifted, the military is still in the midst of the shift. The Armed Forces will out-perform the adversary in combat or prevail in near-war situations, only if there is complementarity between the civil and the military, and there is a sea change in the former's attitude towards the latter. The success hinges on strategy of cohesion and info-sharing.

Info-war defies distinction between peace-time and war-time.

It portends a continuum. It is lack of this understanding that has led to our inability to face info-blitz that Pakistan has unleashed on Kashmir. K Subrahmanyam avers, "Pakistan has not only been fighting a covert war against this country over the last 14 years, it has also been waging a major information warfare campaign."[22] He bemoans inertia of the Indian Government, particularly of the ministries of external affairs, home and defence; laxity in maintaining a "documented record of developments" and crass indifference of conducting "continuing assessments of the US and Pakistani policies" on Kashmir.[23] Maintaining that "it is difficult to escape the conclusion that India has not put in adequate effort in fighting back the information war offensive", he advocates a proactive stance on Kashmir which fosters a new information policy.[24]

A national information strategy is an important adjunct to overall national security and a determinant of the shape of NII which should be evolved ensuring strategic compatibility and conforming to the objectives that emphasize security. The strategy is not only meant for traditional military contingencies and warfighting, but also peace - time employment of the security forces in aid to civil-power, counter-insurgency operations and management of national crises, when the military must perform missions far beyond its traditional bounds.

Info-operations are conducted with a view to knocking out telephone switches, crashing stock markets, attacking electronic routes for rail system, embezzling bank accounts, disrupting air traffic control, spying, creating fear psychosis; demoralizing the opponent; the list is endless. The strategy has to defend these networks and systems, on the one hand, and deny or destroy those of the adversary, on the other.

Soft Kill vs Hard Kill

The discussion is centered on whether soft-kill weapons are as potent as the hard-kill and whether these can be a viable substitute for the latter. Soft-kill weapons, germane to info-war, either destroy information systems, or mutate the content. These include electromagnetic transients, chipping and microbes, that

eat, burn or disable the hardware; malicious software, that decimates data and pulverizes operating system; and information swingers of varied types which engulf the adversary in a fog of disinformation.

Electromagnetic Transients include electromagnetic pulse (EMP), which could be either nuclear-generated or non-nuclear; Transient Effects on Electronics (TREE) and their cascading reactions in conjunction with system-EMP, High Power Microwave (HPM) and Radio Frequency (RF) incapacitors, and Plasma Assisted, Slow Wave Oscillator (PASOTRON)[25] devices. These release high energy pulses which burn out compact electronic microcircuitry and densely packed components. Though not explicitly acknowledged, there has been a hint of Tomahawk-delivered HPM causing disruption to Iraqi radars, computers and communications.[26] Chipping is an unethical commercial practice or a sordid ploy of manufacturing fail-prone chips and palming them off to gullible users in the third world countries.[27] Microbes eat electronic components; in the event of conflict, these could be injected into an adversary's electronics equipment to cause failure.[28]

Worms, viruses, Trojan horses, and back doors fall under the category of malicious software.[29] A worm is a programme which adversely affects a system's integrity, reliability or availability, whereas virus is a self-replicating code segment, which may incorporate an attack programme. Trojan Horse is a rogue programme, designed to disguise the attacker's malevolent intent and clandestinely cause damage. Back door is a surreptitious entry point, patterned to defeat firewalls and other security protections. Malicious software, once injected, is difficult to control and can infect friendly systems too.

Hacking, video morphing[30], eavesdropping, Van Eck radiation[31] picking, password filching, data spoofing, encrypting subversive and pornographic literature, cracking and ciphers, spin doctoring and a host of other instruments, tactics and techniques proffer immense possibilities for exploitation and that too with mindboggling variety and sophistication.

There is an ongoing debate whether info-war can be a deterrent per se. Arquilla and Ronfeldt maintain that info-war may not qualify to be a real war... but it might be developed into "an instrument ... to prevent a real war from arising. Deterrence in a chaotic world may become as-much a function of one's cyber posture and presence as of one's force posture and presence."[32] Builder writes, "If we look at the nuclear menace not as a short term phenomenon, but as 25 to 30 years problem, it suggests the need for long-range work on technologies to neutralize or at least reduce the danger. We need better technical means to detect radioactivity - even if shielded or buried. We know that EMP can be produced by non-nuclear means and can essentially fry the electronics on which nuclear arms depend."[33]

Builder advises that EMP weaponry should be high on the research agenda. It is contended that the instruments of info-war are, at best, soft-kill weapons, which cannot substitute for the hard-kill. This, perhaps, is the current state. However, true merit of EMP weapons lie in rendering opponents' hard kill capability impotent and to that end they bear immense potential. Let it be said unequivocally that no weapon is ultimate; least of all, the one which depends on a vulnerable delivery system. It is likely that in years to come delivery system of EMP weaponry may be imbued with high-precision and these may acquire capability to block weapons of mass destruction in their tracks. Suitcase-sized nuclear weapons are in the offing, so are EMP weapons, which too boast of size diminution.[34]

The Perspective

Info-war has been variedly categorized and in doing so, a common failing is to consider info-war as an amalgamate of disparate forms e.g., command and control warfare, intelligence warfare, electronic warfare, economic warfare, psychological warfare, cyber warfare and hacker warfare.[35] This is somewhat bleary and complicated way of description. A simpler way is to delineate it as a spectrum of levels and forms, as shown below :

Level	Form
Global	Virtual War
National	Net War
Strategic	Cyber War
Tactical	Hacker War

There is a danger in aping US, whose strategy buffs have been unduly impressed by success in the Gulf War and the unfettered technological superiority. America's compulsions are different and their perspective coloured by an obsession to retain leadership of the world and an arrogance to treat it as if it is their fiefdom. Indian perspective has to be India's own and unique. It must conform to the ground realities and these are: we have a hostile neighbourhood and a society which is fractured. We are fighting an info-war, concurrently at all levels, and with all its manifestations.

It would be erroneous to cage Info-war to the confines of military strategy, its domain being much wider. Info-war should envision and manifest a national perspective. India is on the threshold of information revolution, having decided to pursue vigorously an ambitious agenda for establishment of NII. More networks would be established, penetration of computers would increase and a larger segment of the population would be provided access to the Internet and this would make the country more reliant on information technology in all its manifestation. These trends would inevitably create vulnerabilities and lend sweeping opportunities to cyberspies, cyberstalkers and cyberswindlers.

The country faces a tangible threat on its nascent structures from computer hackers, industrial spies and foreign intelligence agencies, particularly the ISI. The telecommunication systems of all the three Services, para military forces and the sensitive establishments are, virtually,at the mercy of the long-haul communications of the DoT, where the unclassified data network is embedded. National security has been a victim of the Indian Telegraph Act 1885. With more than 90 per cent military data travelling over public switched networks, where security consciousness

is utterly lacking, it would be a wonder if we can ever reach a minimal level of communication security (comsec) and assurance. Telecommunication monopoly in the hands of DoT has been a misfortune; NII, if likewise retained by a Government Department or cornered by a public sector monolith, would give no better deal to the security agencies. Ingress of private sector in border areas and sensitive establishments, too, is not in the interest of national security.

It may appear that there is no significant info-threat to India in the near future, but unless we start preparing now, we would be caught napping at the time of reckoning. In the US, the time-frame over which a credible threat could emerge is estimated as 10 years; in our case it could be lesser. Arguably, it exists right now. Therefore, if time to deliberate on issues and initiate planning is postponed, it would be to our peril. Networks, protection of which we need to attend to, are; telephone systems, power grids, railways, air traffic control, gas and oil pipelines, financial services, transportation, medical records, supplies, police detection and investigation system. This underscores the dictum that info-war has no front line and that the networked systems are potential battlefields and these exist everywhere.[36]

In the US, there is a serious debate whether the country is heading for an "electronic Pearl Harbour". The concern is not preposterous, although the kind of distributed architecture, redundancy, secrecy and response diversity that the US has fortified itself with, such a possibility is remote. Nonetheless, it is widely recognized that the damage due to a cyber or hacker attack could be very high.

The seamless and open architecture of information highways have made it possible for stronger nations and large transnational enterprises to create extraneous influences in their favour. India has not forgotten the grim experience of power swindle by the East India Company. There are genuine apprehensions that our vital economic and political interests may be compromised and that we may be subjected to info-aggression. This obviously would aim at interference with our political, social and economic

system, bypassing legitimate government authority and promotion of alternate power centres, antagonistic to the country's interests. Therefore, internal security, maintenance of national integrity and protection of national assets become crucial strategic objectives, on which there can be no compromise. The perspective that we may envision and draw up is that of acquiring infostrength in consonance with military strength. Its foremost precept is that there is no erosion of national sovereignty through exploitation of the GII and penetration of the NII.

At the strategic level, infrastructure represents both strength and vulnerability. In our case, national networks and infrastructure are in public sector. If Railnet is under attack, troops can neither be moved to the theatre of operations, nor can be switched from one threatre to another, if Airnet is compromised, it would be difficult to use civil airfields; if networks that link the on-shore establishment and commercial shipping are under siege, Navy would not be able to take to sea. This is a wartime scenario, peacetime possibilities are no less scary. The stock exchanges could be hacked; the Oilnet could be knocked out, networks that serve banks, insurance companies, electricity, water supply, hospitals and the health department could be infected by viruses, dislocating the national economy and the social services; even putting the entire nation to ransom.

Redundancy in infrastructure is a safeguard, but there are limitations to its optimization, it being highly investment-dependent. The problem can be somewhat mitigated by increasing the number of service providers and opening the infrastructural systems to competition. But this alone would not suffice. Even areas in which the private sector is seeking entry, its indigenous segment has neither understood the gravity of the problem, nor made any worthwhile effort to muster resources to counter sabotage and fight other perils; whereas the multinationals would be impervious to the threats, having hardly any stakes. Bhopal gas tragedy is a case in instance to underscore the argument.

Threats to our security are not necessarily confined to the traditional rivals like Pakistan and China, and restricted to territorial disputes e.g., border disagreements, Kashmir, Arunachal

Pradesh, sharing of river waters etc. The clash of interest may cover a wide spectrum of issues and non-issues e.g., trade, investment, human rights, IPR, non-proliferation or the complex and chronic religious fundamentalism. We may come in conflict with other countries, too, notably the super power, besides, economic groupings, advocacy groups, even trans-national coalitions.

In our case, threat from non-state actors and proxies is more severe than that posed by adversary states. These illicit groups are waging war against the legally established government through naked terrorism, gun-running, drug trafficking, mafia-initiated murders, kidnapping and such like crimes. They have unleashed info-war in a big way. They run regular home pages on the Internet, put out columns in widely-read newspapers abroad, enjoy access to mass media; and have the ear of MPs in the UK and the Congressmen in the US. Some have linkages with foreign intelligence agencies, some get financial help and enjoy patronage of the foreign governments.

One of the essential aspects of successful conduct of military missions, both during war and peace, is inter-service and inter-agency coordination between those charged with planning, controlling, executing and coordinating such missions. This calls for culling of information, networking and access to each other's databases. Much debate has gone on creation of National Security Council. While this would be a fitting coordinating and decision-making forum, it would need mechanism to fuse and access information both vertically and laterally. A security intranet could meet the needs of an information mesh with levels of security, access and redundancy incorporated in it. That it would lean on the NII is self-evident.

The national security net would bring together organizations such as the PM Office, ministries of External Affairs, Defence, Home and Finance; the intelligence agencies; the three Defence Services, DRDO, the para-military forces, defence industry and a host of other organizations. The configuration would be flexible and foster situation-specific cooption. It would neither create another decision hierarchy, nor follow a rigid template. Instead, it

would aim at promoting data-sharing, avoiding duplicity and spurring formulation of a common agenda. Besides, it would provide a forum for composing differences on perceptions; furthering development and recommendations of a coherent and unified policy, and for synchronizing activities to support national interests.

Intelligence is critical to conduct of diplomacy, foreign, defence and economic policies, and other affairs of the state. Intelligence is defined as information sans noise and is purported in its wider sense, not necessarily constrained by the concept of "Other Side of the Hill." A vital objective of the information infrastructure is to create, manage and manipulate intelligence and ensure its crystalline quality. Gone are the days when Defence Services were kept in segregation; now they come in direct contact with the public, as do the other security services - the para military and the police. Therefore, they must be armed with intelligence to conduct assigned missions in pursuance of national objectives; at the same time, have the information wherewithal to counter adverse propaganda and publicity. The attitude of the masses, own or alien, is of vital concern to the government and the security forces, particularly in formulating a strategy to combat proxy wars, militancies and insurgencies, conduct peace-keeping operations, and render aid to civil authority for maintenance of law and order. This is becoming increasingly important in view of increased pressure from the human right activists and organization, and worse, from misguided and pretentious moralists. Our experience in Sri Lanka, Jammu and Kashmir and the North East is a testimony to how costly absence of intelligence and adverse media publicity can be.

At the tactical level main threat emanates from hacker attacks. Throughout history, military doctrine, organization and strategy have continually undergone profound, technology-driven changes. But this period in history is different. It is not only technology driven, but also media-driven. This is an age of video-morphing, spin doctoring, zoom-lensing, gossip-columning, sensation-mongering, and paparazzi. These ravel in conflicts and worse, manipulate conflicts. Hackery has acquired sharper teeth

by online networking, digitization, multimedia, and high speed transmission. V N Narayanan quotes *Hacks* written by Christopher Wren who was Chief of Bureau in many a hot spot, "In every hell-hole in the globe, there is at least one hotel with a bar and this is from this "mahogany ridge" that many of the great dispatches get filed.[37] One such hotel is Ahdoos in Srinagar. "Here is the stage on which reporters meet to fiddle their expenses, exploit the local exchange rate, bitch about one another and pick up hot tips from the sort of police informers and other riffraff who normally infest such places."[38] It is this facet of info-war that we must come to terms with.

Agenda for Action

Part of the agenda is to create information awareness amongst the elite and the public. The Armed Forces are a unifying catalyst that bring the nation together across the divisions of religion, class, caste, region and language. This positive dimension of the military needs to be nourished through info-props and constant shoring. The ideals of heroism, self-sacrifice, compassion, secularism and pluralism that the Armed Forces are beholders of, need to be widely publicized and propagated. The recent Marg poll on public probity which showed Armed Forces at the top, has done tremendous good to the morale of the military and raised its stock in public eye. Besides, this kind of info-crusade is a bulwark against fissiparous tendencies, criminalization of the public life, rise of militancy and violence, which threaten the very fabric of the Indian society. It is therefore, a desirable agenda to pursue.

Information is the *sine qua non* of the third wave civilization. If we do not establish databases, websites, processes, C^3I and decision support systems, information networks and highways, we would obviously deprive ourselves of its blessings; and there would be nothing to protect, nothing to fight for. Therefore, a major component of the agenda should address to the urgency of creating information infrastructure. An ambitious plan has been formulated at the national level for establishment of a multifunctional NII; its tragedy is that the Services have been

blatantly excluded from any decision making, even in respect of secrecy, privacy, cryptography and spectrum management, in which the defence forces have grave stakes. Though copious and elaborate plans have been made by each Service at the strategic and tactical levels, there is tardiness in their implementation and fructification. Elsewhere, commercial technologies are being increasingly injected into the military C^3I systems, but in our case, there appear to be reservations on that account.

The media, generally, has not been kind to the military. Often its role in reporting counter insurgency and anti-terrorist operations has been dubious and code of behaviour much wanting. Mutuality of suspicion between the media and the military stems from the media's penchant to ferret sensitive information and the military's compulsions to protect it from leakage. There are incidents of journalists falling prey to the manoeuvrings of foreign intelligence agencies and, knowingly or unknowingly, spinning news, which presents Armed Forces in bad light or worse, fans extremism, casteism and communalism. This shams a cheap propensity to sensationalize with a view to selling the story, or deriving pecuniary benefits. Media management is an art. Therefore, a part of the agenda is to understand its nuances, and strengthen the public relations. This also calls for a captive news vender, committed reporteurs and a sentient presence on the Internet.

Armed Forces must voluntarily accept socio-economic development missions and civic tasks, which endear them to the populace. Crises and disaster management, through real-time early warning and control mechanism and prompt initiation of relief and humanitarian support measures would be immensely felicitated if effective, robust and versatile networks are created. Security of commercial interests against information abuse is increasingly becoming critical. There are frequent incidents of cyberfraud on the Internet, and once we create national information highways, these crimes would spill over. Cyber-crimes can have far reaching reverberation, with deleterious impact on national economy.

The distinction between crime and war is blurring. Moreover,

the militaries in all democracis, the world over, enjoy no legal or political authority in peacetime to protect civilian information networks from hackers, saboteurs and terrorists. Take for instance drug trafficking and smuggling of arms. Much of it is linked to ISI, yet the defence services have no *locus standi* to intercept it. Monitoring, prevention and detection of arms and drug-trafficking may not be the province of the military, but when others are derelict of their duties, which is not uncommon, brunt is borne by the military; Purulia is a case in instance. National Drug Intelligence Centre (NDIC) in the US runs an information management system, which provides interactive, real-time support by automated indexing of text, graphics, still and video images, sound and text reports.[39] "It has developed a tagging system that allows to draw and merge information from many sources, while still preserving segregation and privacy for its unique client relationship."[40] We need to adopt such systems, which others have successfully experimented with.

Reduction in defence expenditure and creation of a force structure that is lean, keen and mean, is another important item on the agenda. Information is a force multiplier and a force saver, *per se.* Information systems, simulation and virtuality can make training more meaningful and realistic. It would be more cost effective to acquire these force multipliers than to carry out yearly rituals of field, sea and air exercises or battlefield firing. Better electronic connectivity can encourage telecommuting, resulting into improved environment and saving precious fuel, whereas simulation and networking can reduce expenditure on training ammunitions. This fact, alone should spur us to unequivocally accept usefulness of info-systems and adopt them without any compunctions.

Conduct of joint, combined and inter-agency operations for fighting militancy, insurgency and info-terrorism depend on databases and capabilities to collect, store, manipulate and manage data in real-time both for deterrence and war fighting.[41] Strengthening technological base of the country, access to the dual-use technologies, and harnessing technology revolution to meeting national security needs, are other agenda points that beg serious attention. Changed nature of war places increased value on ed-

ucation and expertise and less on old fashioned military machismo and brute force.[42] Info-war also reinforces the concept of equality in partnership amongst the three Services. Therefore, improvement in the quality of intake for every branch, arm and service, has to be high on our agenda.

Conclusion

The range and scope of info-war is wide. At the global level, it forays into international politics and economics and is destined to shape or misshape the emerging and the GII. Its arena stretches over the entire society with information, information based processes, information systems, networks and highways as its turfs. At the strategic level, it covers all kinds of conflicts, nuclear, conventional, unconventional; with activity spectrum spanning cooperation, competition, conflict, conflict resolution, war and what Tofflers refer as antiwar. It has validity at all levels of command, in offensive and defensive and against internal and external enemies. In cyberspace, geographical boundaries, distinctions between war and peace, war and crime, and ethical and non-ethical simply get lost.[43]

Traditionally, focus on info-war has been limited to a small realm within the overall space defined by information warfare. Neglecting larger picture and zooming too narrowly "runs the risk of leaving some frontiers undefended."[44] At the same time, it would be erroneous to accord info-war some sort of an aura and consider it to be a novelty, which supplants all the existing doctrine and strategic thought.

Tofflers describe the thesis of their book, *War and Anti-War as,* "... the way we make war reflects the way we make wealth - and the way we make anti-war must reflect the way we make war."[45] The thesis of this paper is that India is continually at war - virtual or real is a matter of polemics. Acceptance of this fundamental truth would make our understanding of the fast changing Indian society and its anchorage, that much easier. It would help us in laying down ground rules for relationship with other societies, seek a place in the emerging world order, and formulate the right perspective of info-war.

Notes

1. The better known of these clubs are Coordinating Committee on Multilateral Export Controls (COCOM) and its later incarnations. The New Forum and Wassenaar Arrangement, Nuclear Nonproliferation Treaty (NPT), Nuclear Suppliers Group (NSG), Chemical Weapons Convention (CWC), Biological Weapons Convention (BWC) and Australia Group.

2. "Information Warfare : A Two-Edged Sword", Research Review Contents, RAND's Home Page. *Internet.*

3. Lt Gen Sir James Wilson and Lt Gen (Dr) M L Chibber make a pertinent observation that "manufacturing threats is a fine art mastered by most militaries in the world". "Jammu and Kashmir Problem : The Truth", *USI Journal,* (April-June 1997), p. 246.

4. Walter Russell Mead, "Forward to the Past", *New York Magazine,* June 4, 1995.

5. These figures are at best only estimates. There is no authentic data about Internet.

6. "Digital Formats Complicate Information Security Tasks," *Signal,* (February 1997), p.22.

7. "Caught in the Web," *Times of India,* August 26, 1997.

8. The terms territorial and metaterritorial have been used in the context of sovereignty by Dr George Bugliarello in a paper that he presented at the Conference on 'Communication Technology and National Sovereignty in the Global Economy', 21-22 April 1995, Northwestern University. He explains that "any process, entity or structure anchored to ground is territorial, while virtually any activity of an intangible or abstract nature that can be conveyed as information or transformed into information can be regarded as metaterritorial". See George Bugliarello, "Telecommunications, Politics, Economics, and National Sovereignty : A New Game", *Airpower Journal* (Spring 1996), p.9.

9. See Ramesh Chandran, "Internet Indecency", *Times of India,* March 23, 1997.

10. Alwin and Heidi Toffler, War and Anti-War (London, 1994), p.17.

11. Ibid.

12. Ibid.

13. See Suman Sahai, "A treaty to monopolize data", *The Hindu,* December 14, 1996.

14. Ibid.

15. Ibid.

16. See Richard Comerford, "Secrecy for Export", *IEEE Spectrum,* July 1997, p.79.

17. Ibid.

18. *World Telecommunication Development Report* (ITU, Geneva, 1995). Also see "G7 Live", *Internet News Brief,* on the "G7 Ministerial Conference", February 20, 1996.

19. n.10, p.21

20. See Robert H Scales, Jr. "Cycles of War and Information Age Warfare", *USI Journal,* (April-June 1997), p.156.

21. Ibid, p. 157.

22. K Subrahmanyam, "Info-war on Kashmir Proactive Policy Could Win the Day, *Times of India,* September 9, 1997.

23. Ibid.

24. Ibid.

25. James W Rawles, "Directed Energy Weapons : Battlefield Beams", *Defence Electronics* (August 1989), p.49.

26. See *Electromagnetic News Report,* September/October 1992, p.6.

27. Douglas Waller, "Onward Cyber Soldiers", *Time,* August 24 1995, p.40 p.41.

28. Ibid, p.40.

29. Peterson, A. Padgett. "Tactical Computers Vulnerable to Malicious Software Attacks" *Signal,* (November 1993), p.74.

30. Video morphing of Pooja Bhatt, Bosnian war pictures to show use of armour in Kashmir Valley by BBC and the contemplated morphing of Saddam Hussain indicate enormity of the possibilities. For the last mentioned, see Grier, Peter. "Information Warfare". *Air Force Magazine.* (March 1995), p.35.

31. Van Eck radiation is the radiation which all electronic devices emit. This can be picked up by specialized receivers and yield a wealth of information.

32. John J Arquilla and David F Ronfeldt, "Cyberwar and Netwar. New Modes, Old Concepts and Conflict", *Comparative Strategy,* Vol 12, 1993, pp. 141-185.

33. Carl H Builder, "The Future of Nuclear Deterrence," *RAND* paper P-7702, February 1993. .Also see Tofflers, n. 10, pp. 202 & 265.

34. n. 27.

35. Libicki, Martin C. "Dominant Battlefield Awareness and its Consequences". First International Symposium on Command and Control, *Research and Technology*. (June 1995), p. 551, and Libicki, Martin C. *What is information Warfare?* (Washington, D.C. : National Defense University Press, 1995), p.x.

36. "Information Warfare: A Two-Edged Sword" RAND Research Review Contents, *Internet*, RAND's Home Page.

37. V N Narayanan, "When History is on leave". *Hindustan Times*, September 14, 1997.

38. Christopher Wren, quoted in Ibid.

39. See "Information Age Technology Supports the War on Drugs". *Signal* (June 1994), p.43.

40. Ibid.

41. n. 10, p.73.

42. James B. Bursey, "Information Superiority Dashes Thorny Power Projection Issues", *Signal* (November 1994).

43. See Daniel E. Magsig at magsigd@comm. hq.af.mil, *Internet*, December 7, 1995.

44. David S Alberts and Richard E Haynes. "The Realm of Information Dominance : Beyond Information War". First International Symposium on Command and Control, *Research and Technology* (June 1995), p. 565.

45. n.10, p.3.

Impact of Computerised Wargaming in the Army

BRIG ABJEET MAMIK, VrC
MAJ C MANI

Advances made in computerised simulation techniques coupled with the computer's ability to store, process and retrieve a mass of data at incredible speeds, has given a fresh impetus to wargaming. Thus in any game which requires handling a large number of items of information be it intelligence, logistics, weapon characteristics, or any other variable and determining their relationship according to predetermined models, the computer has proved to be a handy tool. Computerised wargaming is now accepted in all modern armies as a valuable aid in training and scientific analysis of battle situations. These are not only objective and cheap but possibly the only means available to cover a wide spectrum of activities from training of field commanders and staff to the study of the impact of new weapon systems and an assessment of the effect of certain strategies and tactical doctrines. Computerised wargames transcend decision making in these related fields from the realm of experience and intuition to one of scientific analysis.

Computerised wargaming was accepted as a philosophy for training in the Indian Army in the early 1980s under General K Sundarji, who as Commandant, College of Combat, headed a team to study the subject, resulting in computer implementation of the Quantified Judgment Method of Analysis (QJMA) as evolved by Colonel TN Dupuy of the US Army. Thereafter, the battalion level wargame (Rel 1.2) was successfully developed in 1996. The lessons learnt during the development of Rel 1.2 have been well

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assimilated. These are being incorporated in the brigade and combat command (Rel 2.0) and corps level (COREX) computer wargaming projects. At this stage, it is well worth pondering over whether the benefits have percolated down to the user in the field. Due to the evolutionary nature of the subject thus far, it has been the exclusive preserve of a chosen few in the Indian Army and the DRDO. There exists a wide gap in perception between the user, the development agency and the agency tasked with coordinating development activity for computer wargaming projects.

Benefits of Computerised Wargaming

The encroachment of the computer into the world of wargaming has been so stunning and dramatic that computerised wargaming has come to represent many things to many people, whether it be the hobby game, politico-military, or the full-spectrum global wargame. It is an essential element of combat team training. Wargaming as a training tool constitutes the overriding value of the wargaming technique, whether tactical or strategic.

Using the wargame beyond the training dimension is fraught with flotsam that endangers the utility of the outcome unless managed with great care. There are varied perceptions on whether operational plans at tactical and operational levels can be validated by computerised wargames. The fact of the matter is that no computer can fully replicate the human brain. Further, while tactics and battle craft is an art which is governed by ground and the man both of which cannot be truly quantified, handling of weapon systems, communication systems and logistics planning are skills that can be quantified with greater ease. The conflict resolution results generated by mathematical models do not fully represent the many intangibles of the battlefield. However, when used as training wargames these results inject a degree of objectivity and may be used to progress the wargame in a manner that can achieve the objectives set by the commander conducting the exercise. There is however no denying that at the national and strategic level they can be of value. However, a National Security Council, charged with strategic decision making and with requisite inputs is mandatory for the exploitation of the strategic wargame concept.

Computer wargames can easily play the same scenario any number of times by varying key inputs. Therein explains the potential for great advantage today in the employment of the computer-aided wargame, especially as a research tool-with its facile ability to replicate and vary key inputs.

The use of simulators as a gaming technique can present individuals, units, and even battle groups with a wide variety of tactical scenarios. They can provide a large number of encounters of sufficient magnitude to develop a highly competent combat team. Procedures, doctrines, and teamwork can be, honed to a relatively sharp edge. Repetitive training is important. Care must be taken to ensure, however, that computerised wargames supplement and do not replace training in the field.

Wargames have traditionally been used to help prepare junior officers to meet the requirements of higher command by giving them a taste of the problems and opportunities of commanding armies or fleets. Wargames can help the professional commander and staff officer to gain experience in decision making under conditions that are difficult or impossible to reproduce in peace time (such as full-scale mobilisation). For a large standing army like ours the value of the computerised wargame is immense. Further, ours is a vast country with varying terrain conditions from the icy Himalayas in the North, the hilly jungles in the North East, the plains and barren deserts in the West and the long coastline in the peninsula. Our geostrategic location has also generated many potential adversaries who have different military capabilities and use different techniques of warfare. Handling of such large information database can be well performed by the computer.

India is emerging out of the shadows as a major technical power. The extensive research and development (R&D) base existing in our country has given the military new weapon systems which in turn have generated greater strategic choices to the military commander. The choice of the best weapons and the men who will most skillfully employ them is a major concern for the military and the nation. Wargames are important tools for helping to make such choices.

Expectations of the Army

Ready Reckoner. The Indian Army last fought a conventional war more than 25 years ago. Therefore, presently manual wargames and Tactical Exercises Without Troops (TEsWT) form an important test bed for training of commanders and staff and validation of operational plans. More often than not, during these wargames, objectivity in determining results of a conflict becomes the first casualty. Thus there is a definite requirement of a computer assisted wargame that can provide objectivity in conflict resolution. The model would provide assistance to the control organisation to determine casualties, time and space aspects. The Wargames Section at Army Training Command (ARTRAC) has developed two computer assisted wargame packages CDR 1 and CDR 2 that are presently being used in manual wargames.

Tactical Trainers. Tactical trainers typically exercise players in planning and execution of operations at brigade and battalion levels. The emphasis here would be on honing of battle drills and procedures. There is no denying the fact that these drills and procedures are best practiced in the field. Even so, a computerised tactical trainer can be of value since it can provide the following features that are normally not associated with training in the field. Therefore, these could form a very important part of the training system even at the battalion level :-

(a) Facility to instantly zoom in and out of a particular area of interest.

(b) Analysis and comparison of results in terms of time and space.

(c) Saving results for subsequent analysis.

(d) Real-time appreciation of time and space for deployment, move and redeployment.

(e) Line of sight facilities to effect observation and engagement.

(f) Ready reckoner for battle drills and procedures at unit and sub unit levels.

(g) Provides an objective insight into the effect of time and space and attrition on Commander's plans.

Our experience in conduct of Rel 1.2 user trial exercises has confirmed the training value of these tactical trainers. An interesting feature observed is that a computer is like an infantry soldier in that apart from being told what is to be done, it has also to be told how it is to be done. Thus in a manual exercise, gaps and voids in the orders given by the Commanding Officers are taken care of by battle drills and procedures and the chain of command. The implementation of these orders are directly related to the efficiency and competence of the battalion. In the computerised wargame, however, no voids are acceptable. There have been instances when due to inadequate orders the commanding officer has been forced to fight the battle with reduced resources. In the ultimate analysis, there is no ready reckoner at the infantry battalion that will keep track of the expenditure of combat resources and the time penalty that must be levied to make these resources available. The input formats designed for the tactical trainer form an exhaustive checklist for battle drills and procedures thus ensuring nothing of consequence is missed out. They in themselves are an important teaching aid for the sub unit.

Operational Level Wargame. The corps is a viable force comprising of all arms and services, including air, for the conduct of major operations. Decision making at this level is more complex and requires detailed coordination of all resources available. In the planning and execution of a corps battle the plans are framed at the theatre level. Apart from the operational considerations such as combat power, logistics is an important restraining factor. The communication infrastructure available, the production capacities of our defence oriented factories, stockpiling of resources vis-a-vis the need for dispersion to avoid interdiction by hostile aircraft and missile systems, the chain of supply and replenishment and if one may put it the nation's will and stomach for a fight may well be called into play. A computerised wargame would perhaps have its greatest utility at this level when the sheer scale and magnitude of operations are considered. The emphasis here would, however, be in creating situations or scenarios that

will exercise players in decision making. Results of conflicts are typically determined by use of aggregate mathematical modelling techniques or look up tables. The processing and database requirements are considerably more complex than in tactical trainers discussed earlier. However, to ensure greater realism in training, one must not lose sight of the actual conditions that exist on ground. This is with particular reference to the level of computerisation attained by formations in the field and the level of computer literacy. The computer will thus be used as a tool to simulate those aspects that can introduce considerable savings in cost and time. For example, mobilisation, realistic movement of formation and units to their operational locations, preparation of gun areas, dumping of ammunition, effects of weapon systems, etc. may be simulated. The commanders and staff would function from command posts and shelters as they normally would in the field.

Computerised Wargaming and the User in the Field

Approach Adopted. Having broadly seen the types of wargames that could be of utility to the Indian Army, the question that had to be answered was the type of approach to be adopted in development of a family of wargames at various levels that could be independently or simultaneously played. The options were either a bottom-up approach-battalion level to corps level or a top-down approach-corps level to battalion level. In the event a bottom-up approach was adopted. Although it is easy to be wise in hindsight perhaps a top down approach would have been better from the point of view of user acceptability. This is because wargames are of greater use at higher levels where emphasis is on decision making vis-a-vis at the lower levels-brigade or battalion-where emphasis is on drills and procedure. In addition, adequate thought was not given to the infrastructure in terms of manpower and facilities necessary for fielding of these systems in order to make them available at the grass root level.

Despite the reasonable progress that has been achieved in this evolutionary field the impact of computer wargaming on the user in the field has been barely felt. Despite the significant advantages and cost savings that can accrue, there has been

very little interest and commitment expressed by the Army. A major reason for this is the gap in perception that exists between the user and the DRDO. There has been little effort to propagate the utility of this evolutionary subject. As a result the user is beset with considerable apprehensions, some of which are :-

(a) A feeling that the art of warfare and generalship will be reduced to a set of mathematical equations.

(b) Inability of the computer to adequately represent intangible battle winning factors such as morale, valour, training and leadership.

(c) A sneaking suspicion that a player who performs well in a computer wargame need not necessarily perform well in the field.

(d) Lack of confidence in the ability of the DRDO to develop a good model.

(e) Generation of casualty results in existing models (CDR 1 and 2 and Rel 1.2) that are not validated by actual battles in the field.

Reasons for the Gap in Perception. Some of the reasons for the gap in perception are given below :-

(a) A new and evolutionary subject lends itself to many interpretations.

(b) Lack of understanding of facets and features of existing models.

(c) Inadequate compilation and dissemination of literature on the subject.

(d) Inadequate level of computer literacy in the Army.

(e) Inadequate hands on experience in playing of computer wargames.

(f) Inadequate commitment in terms of funds and manpower to develop and establish infrastructure for computerised wargaming.

Measures to Bridge the Gap

Conduct of User Trials. In mid 1996 a considered decision was taken to hold user trial Exercises for Rel 1.2 once every two months. Therefore a ready forum was available to implement measures (given below) to bridge this gap :-

(a) Issue of detailed General Instructions to participants for smooth conduct of exercise.

(b) Graduated and detailed briefing to all participants.

(c) Adequate period given to participants for familiarisation with the facets of Rel 1.2 (the battalion level exercise).

(d) Regular interaction and visit by representatives of formations to Wargaming Development Centre (WARDEC).

(e) Issue of users handbook and booklet on *Shatranj* software prepared by ISSA, DRDO.

(f) Incorporation of representatives from formations attending subsequent User Trials to enable familiarisation and consequent smooth conduct of proposed user exercises scheduled during 1997.

(g) Issue of detailed literature on Rel 1.2 to all Commands.

(h) Conduct of User Trial exercises exactly as per structured format as conceived in the design of Rel 1.2.

(j) Incorporation of user feedback points and consequent refinement of the software.

(k) Adequately trained interactors.

Familiarisation Capsule Cum Seminar On Computer Wargaming. A familiarisation capsule cum seminar on computerised wargaming was conducted at School of Artillery, Devlali in Dec 96 jointly by ARTRAC and DRDO. The following issues were addressed during the Capsule :-

(a) Spreading awareness and culture of computer wargaming.

(b) Preparation and issue of a Handbook on Computer Wargaming and handouts on all related subjects. This Handbook was the first of its kind in our Army.

(c) Raising the level of confidence of the user by providing hands on experience.

(d) Providing an interactive forum between the user and the Development Agency (DA).

(e) Gaining of first hand user inputs for the operational level wargame.

(f) Conduct of an exercise on framing of functions and combat rules.

(g) Identification of nucleus of officers who could be included in the Project Management Organisations of future computer wargaming projects.

(h) Evolving of the approach for development of COREX.

Computerised Wargaming Development Plan

Having taken the measures identified above, the foundation for widespread proliferation of the culture of computerised wargaming was laid, and simultaneously the basic approach as well as modus operandi evolved. Therefore, having established a sound and proven technological base we were in a position to take positive and significant steps for the development of state of the art computer wargaming models and simulators. It was thought opportune to make a presentation to the Top Management with a view to seek principled approval as also budgetary support. The following aspects were covered :-

(a) Need to accord overriding priority and commensurate budgetary support during the Nineth and Tenth Plans to computerised wargaming.

(b) Concept of an empowered Apex Group and Management Board for simulators, computer wargaming and computer aided training, to include appropriate representatives of Army HQ, so that projects analysed and recommended by the Apex Group are expeditiously processed for Ministry of Defence sanction and budgetary allocation. The detailed project proposal takes into account the following :-

(i) Financial implications.

(ii) Obtaining of detailed views from sponsoring and concerned Directorates, expert technical opinions of DRDO, SDD, DGEME and so on.

(iii) Market research and review to include foreign and indigenous agencies.

(iv) Experience gained from earlier similar projects.

(v) Detailed interaction with users through workshops and seminars.

(vi) Attending conferences and exhibitions.

(vii) In-house discussions.

(c) Using the expertise and experience gained in the development of Rel 1.2 as an R & D base, develop a state of the art Rel 2.0 Model incorporating all the modifications and improvements noticed as a consequence of the Rel 1.2 User Trial Exercises.

(d) We would thus, in the near future, have a three-tiered computer wargaming facility at battalion, brigade, division and corps level which could be run concurrently, dovetailed into one exercise in similar tactical and terrain environments and also enable running of three independent exercises in the same environment at three separate levels.

(e) The following activities need to be exclusive of each other :-

(i) Coordination, planning and management, concept evolution, refinement and new projects.

(ii) Development, validation and trials.

(iii) Fielding and training.

(f) We need to establish a comprehensive facility, with a minimum mandatory nuclei staff, with funding to hire civil resources for maintenance and administration, wherein computer wargames may be played at different levels. This state of the art, integrated facility, should be self contained to include the essential features of administrative support that would ensure convenience in utilisation and minimum

dislocation of the user formations from their permanent locations. This will also ensure the imbibing of the culture of computer wargaming in a more deliberate and effective manner.

(g) Computer Wargaming projects should be jointly sponsored by the Army and the DRDO incorporating the following features :-

(i) *Project Management.* Jointly by the Army and the DRDO, headed by the Army.

(ii) *Cost.*

(aa) Development, validation and trials by the DRDO.

(ab) Accommodation, infrastructure, fielding and training by the Army.

(ac) *Maintenance.* Separate funds to be catered for. Options could be Army and DRDO, annual maintenance contract with civil trade or a mix of both.

Conclusion

The paper has attempted to analyse the benefits of computerised wargaming, its applicability to the Indian Army, the efficacy of the course adopted thus far and mid course corrections needed to enable this subject to attain its immense potential. The emphasis has, therefore, been in suggesting a future course for computerised wargaming that will truly take into account the requirements and aspirations of our Army. This is not to suggest that computerised wargaming is a kind of magic answer to all the problems faced in training of commanders and staff in the Indian Army. It is part of a larger toolkit of techniques useful for learning about warfare. The tried and proven methods such as exercise with troops, sandmodels and TEsWT are all useful methods. Computerised wargames can supplement them effectively and assist in the overall aim of having a well trained Army.

The Gathering Storm in the Air Force

MALLY DOUGLAS

Introduction

Of late the Indian Air Force (IAF) has been hogging some lime light in the media - Print and Electronic - which is quite disturbing for almost every one except a few hot headed and blue blooded within the establishment and controlling bodies. For some of us, who have spent close to four decades in service, it is even distressing.

The IAF is not a very old Service. Merely 65 years of existence does not give it well recognised and upbeat traditions which generate adhesives and cohesiveness. Compared to it the Army has over three centuries of its colourful existence. But the very nature and potential of the IAF makes it a formidable element of the Defence system and hence its own importance which cannot be underrated.

I will confine to only two major aspects which have a direct bearing on the espirit-de-corps, morale and efficiency of the Service. They are

(a) Flying and Flight Safety.

(b) Remuneration and Recognition.

FLIGHT SAFETY

Risk in Flying

Flying is a high risk profession, yet it is safer than driving on

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the 'terra firma' which has been and can be statistically proved. But there are ways and means of reducing the risk to life. Basically risk is a phenomenon connected more with the individual performer and there are many psychological and physiological factors that make up the sum total risk proneness. However, organisationally a lot can be done to counter this demon in the form of well thought out accident prevention programme. Accident is an unintended situation created due to unforeseen circumstances beyond control. Such occurrences are routine in life in the nature's scheme of things. The creation of life or even the universe can be considered as an accident. However, we have to take note of the devastating impact of loss of human lives and the public resources.

For any preventive programme, diagnosis is necessary. No physician can treat if the symptoms are not disclosed truly and accurately and the subsequent feed back. At the same time when we have to compare the state of health with others, we must compare ourselves with healthy persons before we raise a hue and cry. Our suffering or tolerance to suffering is proportional to our stamina and resilience to parasites. For a correct diagnostic approach, we must have correct answers to the following indicators of the force, during a given period of say one year or a decade or a phase viz induction, consolidation, operational, overhaul, redundancy and replacement and so on.

(a) Total number of aircraft on inventory - type wise.

(b) Total number of serviceable aircraft including war reserves.

(c) Number of pilots per serviceable machine.

(d) Number of engineers per serviceable aircraft.

(e) Number of flying hours per machine on inventory.

(f) Number of flying hours per serviceable machine.

(g) Number of landings per aircraft - serviceable and on inventory.

(h) Number of flying hours per pilot.

(j) Number of hours per pilots - role wise.

(k) Number of flying hours per pilot, role wise, on active flying duties.

(l) Number of flying hours per pilot Fighter and Bomber streams.

(m) Number of flying hours per pilot for Transport and Helicopter streams.

(n) Number of sorties (landings) per aircraft and role wise, per hour of flying.

(o) Number of accidents (aggregate)/type wise/role wise versus total flying/sorties.

(p) Number of near accidents/serious incidents, not amounting to an accident.

(q) Number of incidents reported and recorded.

(r) Number of incidents not reported.

In my view, the figures will be startling - not merely eye openers. Their comparison with other Air Forces will be quite favourable. True analysis will help us in bringing down the accident rate further. Accident rate should be worked out in relation to sorties i.e. number of take offs and landlings and not flying hours as most of the sorties, particularly in the fighter stream and training, are of less than one hour duration and there are more chances of accidents during the take off and landling. This data will also reflect our true potential, utilisation and quality of manpower, productivity, inputs for future planning and restructuring, skimming and slimming, streamlining and strengthening the infrastructure. Since the IAF has inherited and follows practices enunciated by Lester B Pearson of the Royal Air Force (RAF) nearly 80 years back, it will be worthwhile comparing our safety record with that of the RAF. 'Death hovered over training squadrons; 14,166 pilots died during the war, 8,000 in training accidents in UK.[1] We could draw our deductions proportionate to our years of existence. The RAF figures are upto the year 1996.

Engineering Support for Maintenance and Repairs

Major hinderances to our productivity lie in well known but often ignored, factors such as :-

(a) Casual commitment and work culture.

(b) Improvisation due to shortages or non availability of proper tools, parts, trained and skilled manpower, and the testing facilities.

(c) Over ambitious and unrealistic indigenisation and production targets and time frames; false hopes and achievements.

(d) Lack of quality workmanship due to poor supervision, qualifying standards, on-the-job training, distractions and diversions in work situations, secondary duties and dual responsibilities, transfer turbulence and disruption in continuity of assigned task or project on completion of stipulated tenures.

(e) Duty timings not related to the work schedule - extended presence may be more in terms of hours and fatigue but not necessarily the work output.

(f) Damages and losses due to accidents eat into our productivity and potential - in terms of material, manpower, financial resources and force levels.

(g) Dependence on others for 'day to day functioning' and unforeseen contingencies.

Quality of Leadership

'History's worst attrocities were carried out in good faith by humanity' is a Biblical truth. We are no exception to this. Effective management and efficient execution enhance productivity, which represents the true potential of any organisation. Espirit-de-corps and harmonious working and living conditions are a pre-requisite in arenas employing large bodies of human beings. This environment needs delicate balancing and depends on the maturity and vision of those in top echelons. While trickling down, their thinking

and actions follow the properties of waterflow i.e. it flows down and seeps into every nook and corner, curve or crevice in sand or stone, will cause a sink and flow. Therefore, frequent tinkering, even minor adjustments caused through casual, whimsical, impulsive or impetuous approach are enigmatic to its sustenance. Lobbyists' approach cuts into the organisational interests. It becomes difficult to know who takes the better of whom and much time gets diverted from constructive to conspiratorial thinking. Some times we suspect the functioning of our own organisational components - like the Ministry of Defence, or Defence Research and Development Organisation (DRDO) etc – as if they are our enemies. They may be ignorant of our ground realities and nitty gritty trivia, but their ignorance could be our bliss. Hence the quality of leadership at every level becomes the single most relevant pillar of all activities, during peace and war.

Inadequacies of the IAF are multi-faceted and multi-dimensional. However, to build up the human resource is the most vital one. This resource being of a transient nature, its constant replenishment with equally motivated and qualified personnel, though difficult, is important. Still more difficult is to resurrect a highly competent and skilled but demoralised force. Presently, this is the core issue and as is evident, demoralisation has set in due to 'failure of leadership'. We certainly cannot blame any hand - foreign or otherwise - nor can we point a finger except at the 'finger trouble'. We cannot even blame any nexus - political or bureaucratic. The enemy to combat and eliminate is the enemy within.

Accident Prevention

Cultivation of skills - flying, maintenance or administrative - is done through systematic training, under proper supervision, with adequate regularity and in pre-set time frames. Sophisticated training aids in the form of specific to type of aircraft and armament simulators, video tapes and games and internet hooked on to selected websites, are available. Before jumping into the arena for flying and flying related activities like traffic management, weather forecasting and weather reports can be mastered through

these aids. The effectiveness of practical experience cannot be substituted but the quantum of practical experience required to attain proficiency can be reduced thereby increasing the life of the costly machines. Communication revolution has made it possible to restructure our procedures and monitor progress at each stage of servicing, maintenance and flying almost instantaneously. Also in the present day fast pace of technological advances, 'Advanced Trainer' will be a myth, - it will no longer be 'advanced' by the time it is acquired. Simulators with specific to type 'packages' will be quicker and cheaper options. It will reduce aggregate flying effort, thereby effecting economy which will make it possible to acquire a small number of dual role - training cum operational machines to meet the requirement of quality training.

The immature gossip of who-is-better-than-whom had always humoured us (as youngsters) in the past, but creating a class within a class was never attempted. .We had been having the 'bent - necks' of first batch of Jet Engine Pilots versus the straight faces of the Piston Engine Pilots; then came the twin jet Canberras vs the multi piston engine Liberator, followed by the 'Super - Sonic's superiority over the 'Sub - Sonic'. Likewise the heavy transport aircraft over the light transport aircraft, or twin engine helicopters over the single engine helicopters or the armed helicopter versus the unarmed one or heavy lift giant helicopter over the medium lift capability or strategic long range heavy airlift capability over the short/medium range etc. But should we create special or superior class which would get obsolete alongwith the obsolescence of the technology and role?

A word about work ethics and attitudinal deficiency. Each one of us has the right to have and express a viewpoint, which must get due consideration, as long as it does not become an obsession and cuts into the roots of logic. Honning and clonning of flying skills and killer instinct in military aviation is essential but they cannot be achieved by jugglery, juvenile approach or indulgence in 'Self Deception'. Let me illustrate a few expressions of basic distortions and perversions of the mind set - e.g. **Risk** and **Fighter.**

With the progressive advancement in technology, post-pro-

duction updates and soaring procurement and operating costs, the risk factor is supposed to reduce, as is evident from the declared 'all time low' accident rate. But in our context it is just the reverse! The radar - ground as well as airborne - the arrester barrier, the parachute, the ejection seat, the head-up and helmet mounted displays, the aiming and target acquisition systems, the latest navigational aids, homing and target seeking devices for aircraft and weapon systems, the fly-by-wire, the enemy and ground proximity warning systems, the state of the art communication and recovery systems, the after-burner, reheat and twin 'engine safety' in combat aircraft, the escort and the potent armament for self defence, the SAMs, AAMs, rockets and guns; they all add up to increase **Risk** factor monumentally! The advanced technology which is supposed to make flying inherently 'safer and ensure greater safety, survival and shooting', is creating a mirage of **'Risk'** in our thought, planning and doctrine. It is also obliterating the difference between 'kill' and 'die'. Paradoxically, the **fighter** fatalities during war are lesser than during peace! Hence all fatalities get converted into this misconceived **Risk;** and lack of experience, skill or professional competence, which are mainly responsible for such fatalities, get glorified.

RUMUNERATION AND RECOGNITION

The Fighter Pilots

The word 'Fighter' has become a phenomenon. Instead of indicating a role or a role model, they conjure up a funny presentation like that of a highly publicised circus. A cursory glance at the list of awards for bravery in the face of enemy, compiled by *Indian Defence Review* will reveal as to who fights whom and who is a real fighter and exposed to greater risk. Out of a total of one PVC, 21 MVCs and 200 VrCs awarded to the IAF since Independence during hostilities, one PVC, 10 MVCs and 105 VrCs have gone to the Fighter stream and the balance of 11 MVCs and 95 VrCs to non Fighter stream. An equal number of other bravery awards during low intensity conflicts, natural calamities etc. have also been bagged by non-fighter streams, almost exclusively. Incidentally, it may be mentioned that in 1954, any

'Fighter' pilot wanting to convert to transport (DAKOTA) aircraft had to have a minimum of 800 flying hours - because even HARVARD, a trainer aircraft fitted with guns, was claimed to be a 'fighter aircraft'. Ironically, they take recourse to transport flying when they drop their medical categories or seek premature retirements and won't hesitate to fudge or inflate the experience to get a 'license'.

Physiologically speaking, they are endowed with good health, a healthier mind, greater agility of body and intellect, quick on the uptake and dashing approach, during the initial period. However, the shine, grit and grace progressively yield to conceit and hypocracy - perhaps due to excessive 'G' exerted on their minds and bodies, during briefings and flying. Inspite of their prominence, it is difficult to define or discern the complex compounds and elements they are made of. Inspite of their acknowledged superiority they want reservation of posts and quota for selections, and monopoly of command posts although they have never worked even as a team; being used to single crew cockpits.

No one can grudge the fliers an allowance to insure themselves and their families against the perceived risk. As early as 1956, whenever we were detailed to airtest an aircraft after major overhaul, HAL used to provide us an insurance cover of Rs. 80,000/- for that particular sortie. But to ask for a separate 'Pay', to have a different life style for the 'shortened' life span or for being a superior class, or even to create a new class, will be stupendous as well as inviting a quicker doom for the endangered species.

Modern highly sophisticated and technologically advanced machines require higher standards, more competence and greater skills to operate. The pilots, therefore, need to be paid more, while on the job but not for the 'Fighter Tag'. Advanced and sophisticated machines are costlier than their older versions but they are inherently safer and more pilot friendly. In case the pilots still face greater risk and their fatalities are more, it simply means that they are not equal to the job, and need not be paid more.

Optimal Utilisation of Manpower

In the past, we maintained the balance of the Force by optimising the manpower utilisation by trans - stream and inter branch adjustments which proved quite productive e.g. drawing aircrews for Canberra aircraft from Transport as well as Fighter streams and transport aircrew performed equally well, if not better, even in high altitude bombing and strategic and photo reconnaissance. The seniors went out of their way to ensure working and societal harmony and ensuring welfare of one and all. Division and degradation of each other was meticulously avoided. The dignity of duty was profound in service ethos. .Derogatory references like the 'Darvaans of Airfields' for air defence fighters, 'Truck Drivers' for transport aircrew, 'Godaamis' for logistician and 'spanner or screw driverwala' for Engineers etc were seldom heard and never encouraged. Social behaviour and financial probity were always practised by top echelons and seldom flouted. It is about time that the authorities saw through the hoax of risk fatalities and supremacy of the egocentric 'Fighter Pilot' and restored the magnificent force - reduced to a farce - sooner the better. All glaring disparities and inadequacies needlessly created, need to be removed urgently before we face a national calamity. While the Ministry of Defence revel into their inert and abdicated sense of responsibility, we on our part should lean towards the pillar of sincerity and take shelter under the umbrella of introspection and correction. Coercive instructions like rendition of certificate before receiving payments as per the new pay scales (contained in the *Gazette* notification) stating that the receipients will accept the Fifth Central Pay Commission report in toto, need to be withdrawn. Let us not continue bartering logic in favour of conceit and put some mortar to rejuvenate the morale and espirit-de corps.

Conclusion

The Fifth Central Pay Commission deliberated for nearly three years the wage structure, before submitting their report. Must we make adhoc amendments to suit a few or promote partisan interest and upset the balance? Must we dismantle and

destroy the composite strength and culture of the Force by creating class(es) within a class? It is fine to claim that inter-branch disparities in pay and allowances have always existed and we all knew about them before joining Service voluntarily, but it must be highlighted, whether disparities existed within the same branch? Obviously the common 'villain' i.e. the politico - bureaucratic nexus, with a coating of ambition has come into play, thus leading to wide spread distortions and discontentment.

Must we design the 'cutting edge' of a double edged dagger made of steel, with a body of pulp, handle–less or with a gilted handle? With a bit of cynicism, one could also say, to be used for cutting a slice of bread once in a couple of decades. Does it not tantamount to dramatising the Dementia? How can we justify a Flying Officer getting higher emoluments than a Group Captain or a Group Captain getting more than a Major General or an Air Vice Marshal of non flying branches? Anyway, competent professionals irrespective of the stream, deserve the best.

As an immediate measure, we must revert to the original recommendations of the Fifth Central Pay Commission tentatively and institute a separate pay commission for Defence Forces, with wider terms of reference, to look into and finalise the rank, pay and cadre structures; promotion and career prospects; warrant of precedence in relation to other government employees; housing, health care, travel concessions, assured employment upto the age of 58 years and other post retirement benefits.

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A Bio-Data to Sell the Soldier

BRIG N B GRANT (RETD)

Introduction

It has been observed that, as time goes on, ex-servicemen are finding it more and more difficult to get themselves rehabilitated in civy street. While there are several reasons for this, such as retiring too late in life, lack of business training etc, it is felt that, perhaps an important factor in this may be the way the soldier writes his bio-data. The aim of this article is to assist the ex-serviceman to sell himself through his bio-data.

Objective - Interview

At the outset, let us be clear that, the main aim of a bio-data is to project one's best image, so that he gets to be called for an interview. What happens later on is outside the purview of this paper. In any case, no one is going to offer a job after just reading an application for it.

To begin with, you strengthen your chances of obtaining an interview by projecting the fact that, you are a unique person. Just by having been in the Services does not by itself qualify you for this. You should have a unique combination of talents, which no one else has exactly with your background or experience, and your application should reflect this. The bio-data, backed up by a covering letter should make the case for you getting an interview. It should make the recruiter say: "This looks interesting, let's call him for an interview."

The Bio-Data

This is the basic document. If unemployed and looking for a job, one can send a general one to a wide number of firms. If however, one is applying for a particular job, the bio-data should

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highlight one particular aspect of one's career. The order in which the pertinent facts about oneself are listed is important. A suggested format for a bio-data is given in Appendix.

The bio-data should be typed or even printed, so that it looks good at least on paper. In addition, the biodata should be easy to store. Although an elaborate oversized binding may make an initial impact, some personnel departments will throw away biodatas that don't fit in their filing cabinets.

The Military Terminology

The procedure outlined so far applies to the preparation of any bio-data in general, however, when it comes to giving information of a Service career, we have to necessarily modify the military terminology. It is in this respect that, the soldier requires real advice.

To begin with, it must be made clear that, the future employer wants to know the applicant's capability to do the job in his organisation, and not what he was capable of doing in the Armed Forces, although there may be a lot of affinity between them. In this respect, as far as possible, one should try and avoid Army terminology like Commanders and Officers, and substitute in its place civilian equivalents such as Managers and Executives. Some illustrative examples of this are given below :

	Military Terminology	Suggested Civilian Equivalent
(a)	Commander Faculty of Combat	Head of Faculty of Combat Managerial Department
(b)	Commander Task Force	Project Manager Task Force
(c)	Commandant Staff College	Chief Executive Staff College
(d)	Senior Officer Course	Senior Executive's Course
(e)	A Q M G	Assistant Manager of Logistics
(f)	Signals Officer	Manager Communications

(g)	Commander Works Engineer	Superintendent Engineer Works

Similarly, while describing your achievements, instead of stating how bravely you commanded the attack on Kargil, it is better to say, how well you executed the various managerial aspects of the Kargil operations. In other words, the general principle should be to convert everything military into something connected with the managerial jargon, as that is what the business world understands.

The Covering Letter

Next we come to the important covering letter. This is the means by which you relate your own unique skills and strengths to the specific needs of the organisation you are approaching. In the letter, you can draw more attention to what you think is important in your bio-data in connection with the specific job you are after. Stress again your strengths, the skills you have that you think the job requires, and the reasons you think you could do the job successfully. Show that you have the skills to at least merit an interview.

Before writing the letter, it is very essential to understand exactly what the potential employer is looking for. You must make sure that you have read, marked and inwardly digested everything in the advertisement. Most advertisements are painfully drafted and redrafted. The wording is carefully chosen to reflect exactly the type of applicant the employer is seeking.

Whether you are applying for a specific advertised post, or sending out your bio-data on speculation, you should make an effort to learn something about the organisation that is receiving it. How big is it? What does it make? Is its management centralised or decentralised? Has it figured favourably and prominently in the news recently? Often such information can be worked into the covering letter as an indication that you are anxious to come to work for that particular company. For information on companies, you should try such sources as chambers of commerce, industrial

organisations and even stock brokers. You may even put out feelers among your friends, if the firm is a local one.

It is worth knowing that occasionally a position is created in a company to bring in someone who has written on pure speculation. It may be that a person in a high position has been toying with the idea of a certain project for some time. Along comes an unexpected application which seems to match the requirements for the project and very quickly a job is created. The chances of this happening are always better if the applicant has done some home work and shows clearly what he has to offer. Every time an advertisement appears saying: "This is a new position," a speculative applicant might possibly have got the job before it was advertised.

Although the bio-data should always be typed, if possible, this does not necessarily apply to the covering letter. Many firms like to have a hand-written covering letter. Some specifically require it. In certain cases it is quite usual to have the writing analysed by a graphologist. Even so, it still has to be read by the recipient. Therefore if one's handwriting is normally difficult to read, he should take some pains to make it legible in his letter.

Conclusion

All this, of course, takes time and effort. But if one is intent on landing a job that offers a real advancement in his career, then this is an investment worth making. When one is invited for an interview, he will know his letter and bio-data have done their job. The time and effort he has spent will have been worthwhile. He will know that his main marketing tool is an effective one. It will be projecting the only image he would want it to project — his best one.

Appendix

FORMAT FOR A BIO-DATA

Name
Address
Tel No.

Major Assignments Handled

1. Begin with present position or latest position that you have held -

(a) Give the organisation name, your title and position, and list your major responsibilities and achievements.

(b) Don't exaggerate or take undue credit, keep the text brief.

(c) Confine yourself to what a prospective employer is likely to consider the major important aspects of your job.

(d) Over-elaborating can hurt you rather than help you.

(e) Give enough to make the recipient interested, while leaving out enough to make him want to see you.

2. Continue listing your previous positions in reverse chronological order.

(a) Beside each job description, list the month and year that you began and the month and year you left. If there are any lengthy gaps, be prepared to account for them.

(b) As you go back in time, each job description should become shorter and shorter. There are several reasons for this, especially if you have held several jobs :-

(i) The first is, that you want the resumé to be brief; two pages at the most.

(ii) Second, your prospective employer is going to be most interested in what you have done most recently.

(iii) Third, you must make your resume appear to be a success story. This implies greater responsibility and authority in each successive job.

(iv) If you devote four lines to describing your most recent position, and 12 lines to describing your accomplishments and responsibilities in a job you held ten years ago, the recipient may assume that you are on a downhill slide.

Formal Education

3. List secondary schools and universities attended, with appropriate dates, diplomas and degrees.

Training Courses Attended

4. Next, list training courses on management or other technical skills attended during your career. Again do not overdo it. It is perfectly valid to list an eight-week management course at a management school, but do not mention a two-day seminar you have attended on, say, industrial relations.

Personal Information

5. This would list such personal information as you think might attract the employer and should provide you with a good opportunity to stress your uniqueness. This section should include items such as -

(a) Date and place of birth.

(b) Citizenship.

(c) Marital status and number of children.

(d) Language known.

(e) Travel interests.

(f) Sports and hobbies.

(g) Membership of clubs and associations.

6. There is no need to overdo this section. However, give enough to indicate to the reader what sort of a person you are. In selecting the order to list this information, remember to lead from strength. If you are a top-ranking amateur tennis player, you would want to lead with your sporting accomplishments. If you speak five languages, mention this first. If your hobby relates directly to the type of work you are in, start this section with that information.

7. It is probably best not to list information about your salary in your bio-data. Chances are that, you do not want more people than necessary to know what you are earning. If an advertisement specifically asks for your present salary, or for your salary requirements, this can go in your covering letter.

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War Graves of the First and Second World Wars

LT GEN S L MENEZES, PVSM, SC

The Commonwealth War Graves Commission was established by a Royal Charter of 21 May 1917, and extended by a supplementary charter of 8 June 1964. The current President is the Duke of Kent. The concept was that of Sir Fabian Ware. He had been editor of *The Morning Post* : he resigned from the newspaper in 1911, and joined the Board of the Rio Tinto Company. At the outbreak of World War I, he was too old to be accepted for military duty and arrived in France in September 1914, in command of a mobile unit of the British Red Cross. He was quickly struck by the absence of any official organisation responsible for the marking and recording of the graves of those killed and it was in a conversation with Lt-Col Stewart, a Red Cross medical assessor, that the idea of Ware taking on this task was first mooted. The importance of the proper care of the graves was soon acknowledged by the War Office, both in response to demands from relatives, as also for the morale of troops in the field. In 1915 therefore Ware's work in recording and maintaining graves was recognised by the creation of the Graves Registration Commission, which under his command left the Red Cross and became part of the British Army. Ware was promoted to major, and ended the war as a major general. From the outset, Ware had been anxious that the spirit of co-operation, so evident in the war effort, should be reflected in his work. This multinational aspect was recognised by the Imperial War Conference, and in May 1917 the Imperial (later Commonwealth) War Graves Commission was established with the Prince of Wales as its President, and Ware as Vice-Chairman, a post he was to hold until retirement in 1948 (he died in 1949 at the age of 80, with a tablet to his memory in Westminster Abbey). As early as 1916 Ware arranged for advice

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on the horticultural treatment of the cemeteries to be provided by the Royal Botanic Garden at Kew, and on his initiative the most distinguished architects of the day, like Lutyens and Baker, and the garden designer, Gertrude Jekyll, were engaged to design the war cemeteries and memorials.

The Commission's duties, formulated on the fundamental principles forged by Ware's vision and energy, are to mark and maintain the graves of the members of the forces of the Commonwealth who died in the two World Wars, and immediately after (up to 1921 for World War I, and 1947 for World War II, on account of the continued world-wide post-war deployment of the Commonwealth forces) : to build and maintain memorials to the dead whose graves are unknown, or who were cremated: and to keep the relevant records, now computerized. The cost is currently shared by the partner governments of Britain, Australia, Canada, India, New Zealand and South Africa, in proportion based on the numbers of their graves. India's contribution today is 2.23 per cent of the annual budget of the Commission which aggregates over £30 million. There are 147 countries in which there are Commonwealth war graves and memorials commemorating 1,694,999 personnel. The task is an ongoing one, as for example, World War I bodies are still being found and identified in the fields of France, and World War II bodies in the former East Germany. Casualties previously buried in graves marked as 'Known unto God' have been given identities as a result of new evidence made available. Further names are added to the records as the details of casualties previously unknown to the Commission are submitted by diligent members of the public. Sadly, not all damage to Commission property is due to extremes of nature: vandalism and theft play their part. The Commission is not responsible for Commonwealth military graves between the two World Wars. Almost all the war cemeteries and memorials are maintained by the Commission's own staff. The care of the war graves in civil cemeteries and churchyards is mostly entrusted to local and church authorities, who maintain them in agreement with the Commission.

The Commission's work is founded upon Ware's principles

which have remained unaltered: that each of the dead should be commemorated individually, by name either on a headstone on the grave, or by an inscription on a memorial: that the headstone or memorials should be permanent: that the headstones should be uniform: and that there should be no distinction made on account of military or civil rank, race or creed. The standard headstone is 2 feet 8 inches high. At the top of each is engraved a national emblem, or the service or regimental badge, followed by the rank, name, unit, date of death, age and usually a religious emblem: and underneath, in many cases, a poignant inscription chosen by relatives. In some war cemeteries, notably on the Gallipoli peninsula, in Macdeonia and in the Far East and the Pacific, where there is a risk of earth movement, stone or bronze plaques on low pedestals are used instead of headstones. Climate permitting, the headstones stand in narrow borders, where floribunda roses and small perennials grow in a setting of lawn, trees and shrubs. Two monuments are common to the cemeteries: the Cross of Sacrifice, set usually upon an octagonal base and bearing a bronze sword upon its shaft, and in the larger cemeteries the Stone of Remembrance, upon which is carved the words from the Book of Ecclesiasticus. 'Their name liveth for evermore'. The men and women whose graves are unknown, or who were cremated, are commemorated in memorials ranging from small tablets to great monuments, the latter bearing many thousands of names.

The forces of undivided India played a major part in both World Wars. The war cemeteries in which Indian dead are buried, and the memorials on which they are commemorated in more than 50 countries, extend from the Pacific Islands to Britain: they honour the deeds of the Indian Armed Forces and they form an abiding tribute to the 160,000 dead of undivided India. In the 1914-18 War the strength of the Indian Army rose to one million. They first saw action in August 1914 in the small German colonies in China, and played a vital part in the first critical battles in France and Flanders. In Belgium there are 76 Indian graves in 28 cemeteries, and 417 are commemorated on the Menin Gate at Ypres. In France there are 3,750 Indian graves in some 150 cemeteries, and 5029 commemorated on memorials, mainly at

Neuve Chapelle, where from 10 to 13 March 1915, the Indian Corps fought its first great action as a single formation and lost one-fifth of its strength. The Indian Army formed the major part of the forces in the war against Turkey in Mesopotamia, Egypt and Palestine, and also fought in Gallipoli and East Africa. In Iraq alone there are 8,792 Indian World War I graves in seven cemeteries, and 33,367 commemorated on the Basra Memorial. The Indian wounded brought to Britain from France and Flanders to convalesce were nursed mainly in the Brighton Pavilion, which had been converted for the purpose, and in a convalescent home at Barton-on-Sea. The Hindus and Sikhs dying at Brighton were cremated on the Downs, a poignant monument in the shape of a beautiful Chhatri marking the site. At Barton-on-Sea the dead are commemorated by a memorial in the town, subscribed for by members of the staff of the depot. The then Commandant, Col J. Chaytor White, IMS, left £100 in his will, the interest on it being used towards its maintenance. Neither of these two monuments are the responsibility of the Commission. The cremations of those dying at Barton-on-Sea would appear to have been performed at Brockenhurst. No memorial commemorates this site, but three Indian burials are commemorated by the Commission in the Brockenhurst churchyard. The Muslim soldiers who died in Britain were interred in a special cemetery at Woking, but owing to vandalization and difficulties in maintenance due to its isolated position, all 24 Indian graves were exhumed and moved (in 1968/9) to Brookwood in Surrey by the Commission, in consultation with the Imam and Trustees of the Shah Jehan Mosque, the land reverting to the Ministry of Defence.

The undivided Indian Army of the 1939-45 War was two-and-a-half million strong, the largest volunteer army the world has ever seen. Once again it participated very early on; mule companies of the Royal Indian Army Service Corps were part of the British expeditionary force in the 1940 campaign, ending in the evacuation from Dunkirk. There are 102 Indian World War II graves in 16 cemeteries, and five commemorated on the Dunkirk Memorial. Divisions of the Indian Army won renown in the campaign in the Western Desert, in the Middle East, in Eritrea and Ethiopia. They fought in Italy and took part in the liberation of

Greece, but it was in the East, in the war against the Japanese, that the Indian Army was to play its greatest role, right through from the reverses of December 1941 to the final victory in 1945. In the Indian Sub-Continent, there are three cemeteries with 1,416 graves in Bangladesh, and 6,469 on memorials; two cemeteries with 1,000 graves in Pakistan, and 26,433 on memorials; twenty-one cemeteries with 9,206 graves in India, and 53,017 on memorials.

The memorial figures for Bangladesh, Pakistan and India include the dual commemorations of the Bombay/Chittagong 1939-45 Memorials (422 sailors of the Royal Indian Navy and 6,047 merchant seamen), and the Delhi/Karachi 1939-45 Memorials (25,865). The Imphal Indian Army War Cemetery contains the graves of 828 servicemen, and the cremation memorial bears the names of 811 Indian soldiers and 57 airmen: the Imphal War Cemetery contains the graves of 1,603 Commonwealth servicemen. The Kohima War Cemetery is sited on what was the garden of the Deputy Commissioner's bungalow, where attackers and defenders faced one another across the tennis court, and where after desperate fighting, the Indian and British Armies won a famous victory. It contains 1,421 Commonwealth graves, and the cremation memorial bears the names of 915 Indian servicemen. The other main Commonwealth war cemeteries in India are at Digboi, Gauhati, Delhi, Ranchi, Madras, and Kirkee. The Commission, in addition, has plots and graves in the Calcutta (Bhowanipore) Cemetery and the Madras (St. Mary's Cemetery). The dead in India of World War I are also commemorated in India - 12,321 Indian and British soldiers on the Delhi War Memorial Arch (India Gate) who died in the fighting on the North-West Frontier between 1914 and 1921 and have no known grave, and of those then buried to the west of the River Indus whose place of burial, though known, could not be maintained: 153 Commonwealth dead buried at Meerut, and commemorated by a bronze tablet at the Delhi War Cemetery : 95 buried in the Bhowanipore Cemetery: a memorial to 1,039 dead in the Madras War Cemetery, 23 graves in the St Mary's Cemetery and 1,807 names on the Kirkee Memorial.

The following personnel of the Royal Indian Air Force, who were missing or killed in air operations/accidents are commemorated on the Royal Air Force Memorial at Runnymede :-

Bamjee, Pilot Officer, **Dinshaw Sorab**, 3348, 74 (R.A.F.) Sqdn. Royal Indian Air Force. 8th March 1946. Husband of D.S. Bamjee, of Streatham, London, Panel 286.

Gnanamuthu, Pilot Officer, **Anandaraj Samuel**, 32 Sqdn. Royal Indian Air Force. 11th July 1941, Age 22, Son of Capt. G.D. Gnanamuthu, Civil Assistant Surgeon, of Kollegat, Coimbatore District, Panel 64.

Gnanamuthu, Pilot Officer, **Basker Daniel**, Royal Indian Air Force. 7th November 1941, Age 20, Son of Capt. G.D. Gnanamuthu, Civil Assistant Surgeon, of Kollegat, Coimbatore District, Panel 64.

Khosla, Pilot Officer, **Chander Parkash**, 125 Sqdn. Royal Indian Air Force. 31st August 1941, Age 24. Son of Dr. Guranditta Mall Khosla, M.B., B.S., and Mrs. Khosla, of Lahore, Panel 64.

Rajender Singh Sandhu, Pilot Officer, 2915. Royal Indian air Force. 10th September 1944, Age 21. Son of Hakam Singh, of Pakhopur, Amritsar, Panel 264.

Rao, Pilot Officer, **Cherala Raghava**, Royal Indian Air Force. 4th September 1941. Age 24. Nephew of V. Seshagiri Rao, B.A., M.B., B.S. of Ten Kasi, Madras, Panel 64.

Singh, Flying Officer, **Jagjit**, Royal Indian Air Force. 13th September 1946. Age 25. Son of Sardar Bahadur Santokh Singh. Panel 286.

Viewpoint

'FRONT LINE FIRST' EXERCISE AND ANOTHER 'PAY COMMISSION'

GP CAPT D C BAKSHI, VSM (RETD)

Introduction

The Indian Armed Forces are amongst the most impressive in the world. Presently, they are well trained and highly motivated. They are also apolitical, and that is such a relief to the authorities. Since maintenance of the qualitative edge is expensive, it is essential that every penny spent on them contributes directly or indirectly to their "fighting-capabilities".

With this backdrop, a study was instituted in the United KIngdom on *Front Line First - The Defence Cost Study* to look into all aspects of support-activities of the Royal Armed Forces. The study commenced with an absolutely "no compromise" bottom-line with regard to "front-line effectiveness". It was the support Services which, though a necessity on which the front-line heavily depended, came in 'line-of-fire'. It led to an in-depth rationalisation; closure of smaller, non-viable establishments; civilianisation and privatisation of certain activities.

No such exercise has been done in India. A mini-effort, was made by the Fifth Pay Commission, when they assigned the Institute for Defence Studies and Analyses (IDSA) "Manpower Optimisation" exercise under the stewardship of its Director Air Cmde Jasjit Singh. Since the three Services were involved only by exception, the recommendations of the Report regarding rationalisation, have remained a flight of imagination.

Everyone agrees that "Armed Forces of the future should be leaner, more efficient and more effective". It is well known that the cost outlays in terms of manpower, equipment and technology are sky-rocketting. How does one tackle this paradigm?

Gp Capt D C Bakshi, VSM retired from the Air Force as Jt Director (Research and Development). He was member of the team which worked on the study of 'Manpower Optimisation' at Institute for Defence Studies and Analyses.

Strategic Plans

Our strategy over the next 25 years or so should aim at organising the Defence Forces around the task that we will need to perform on our own without the help of any major allies. This sets the tone for a "defensive - posture". We should have "effective ability" to project our spheres of influence, beyond our borders, to warn friendly or unfriendly neighbours to resist build-ups which might in the long-run be dangerous for us. It is logical to have an effective Defence apparatus capable of functioning on its own, with a high degree of efficiency not only in the far-flung borders but at all critical points within the country too, to meet various contingencies. This will involve substantial financial outlay.

Defence Budget and High Manpower Costs

Notwithstanding the pressure on our Defence budget to maintain the existing Defence Forces, it is in the area of *personnel* that the Defence budget is tightly compressed. The expenditure is recurring and exponential in nature. Various surveys indicate that the pay-compensation, housing and other essential perks are low and need an upward revision. There has been so much hue and cry over the recommendations of the Fifth Central Pay Commission. In the case of Defence Forces; it was an unprecedented move - the three Service Chiefs accompanied by the Defence Minister, meeting the Prime Minister and conveying to him the virtual non-acceptance of the "unattractive" package-deal! A major opposition party has jumped into the fray, by offering to constitute another Pay Commission, exclusively for the Armed Forces, if they succeed in wresting power at the Centre. But all this costs money!

Need for Restructuring

Many serving and retired senior officers will agree that the "top-heavy" syndrome caught up with the Services, with the cadre-reviews. There is some truth in the assertion that tasks performed by Lieutenant Colonels and Colonels and equivalent in the other Services are now being shouldered by Brigadiers and Major Generals and equivalent. The Service Headquarters are over-flowing

with top and middle heavy brass. The secretarial infrastructure itself - staff officers, Private Secretaries, Stenographers and PAs, receipt and despatch clerks, drivers and so on, all joined together make a disproportionate non-combatant complement, eating into the vitals of the main body.

To reverse this trend, Government will have to adopt a bold restructuring plan that would reduce senior officers' ranks, give greater responsibility, a much heavier workload, and of course better pay packets. The new structure would also aim at elimination of duplication of efforts at the senior levels and enable the Forces to examine their needs more objectively. The re-organisation should aim at the following:

(a) Centralisation of policy development but decentralisation of execution.

(b) Integrating Defence and Civilian staff to a greater extent.

(c) Eliminating staffing duplicates particularly at the Ministry of Defence and the Services Headquarters.

(d) Flattening hierarchial structures.

From the savings achieved through these 'Cuts' it will be possible to fund the major pay-rise which is essential to bring in the desired parity. In all probability, it will give greater job satisfaction. It is likely to stem the rise, in the spate of pre-mature releases due to alleged "unattractiveness" of profession of arms monetarily and halt the wastages of qualified and experienced manpower.

Care in Implementation of Reorganisation

Let us take note of possible 'risks' and 'flaws' in the proposed reorganisation. The risk is that unless the root cause of the growth is tackled, there is a likelihood of re-growth in a decade or so. There is every chance that the same 'top heavy' hierarchical structure will re-appear in due course unless efforts are made to plug-in the gaps which will give rise to temptation to re-expand. Suggested remedial measures are as under.

(a) The rank of an appointment should be based on the responsibility and not on status or precedent.

(b) Areas of redundancy should be eliminated by concentrating functions and thus ensuring the same function is not performed at more than one level.

(c) Programme management and budgeting should be introduced as functions of command.

There is a need to handle carefully the "redundancy package" lest the best people leave the Service and leave behind scores of mediocres to thrive.

Need for a Separate Pay Commission for Armed Forces

Armed Forces pay-structure has always been a favourite topic for an active debate. There are those who argue that Armed Forces personnel are 'Professionals' and not as in the civil sector - 'Skilled', 'Semi-Skilled', or 'Unskilled'. For the Professionals there are diverse free markets while for skilled or semi-skilled there are totally regulated markets. Armed Forces pay system is at a disadvantage since it is inflexible. Defence authorities cannot "move" pay rates, as the market for professionals in civil sector moves. Also "merit" is recognised only in terms of promotion. The system attaches no liability to its personnel who do not get promotions and still crave for financial recognition of their "routine" performance. Pay and better service conditions are an integral part of any Defence reorganisation strategy. It is in line with the dictum of increased productivity and efficiency policy. However, pay-hikes alone will not win the personnel retention battle - job satisfaction is the other side of the coin.

Conclusion

The fine-tuning once undertaken would automatically bring forth increased responsibility, authority and status - a long standing area of concern - frequently addressed by the Services.

Ideally, there should be no place in the system for carrying passengers. Reductions in the senior levels consequent to the reorganisation are not to be seen as reduction in opportunities. Our new Defence philosophy is to be woven around **Effectiveness.**

THE MACGREGOR MEMORIAL MEDAL RULES

Introduction

The MacGregor Memorial Medal was instituted in 1888 in memory of the late Major General Sir Charles Metcalfe MacGregor KCB, CBI, CIE, founder of the United Service Institution of India. Till date eight gold and 118 silver medals have been awarded, the last one being in 1997.

The Awards

(a) Silver Medal	-	For Officers.
(b) Silver Medal with gratuity of Rs.100/-	-	For all other ranks.
(c) Gold Medal	-	For specially valuable work in place of or in addition to Silver Medal, if deemed fit.

Criteria

(a) **First Priority.**
- (i) Military reconnaissance.
- (ii) Journey of exploration.

(b) **Second Priority.**
- (i) Mountain/desert expeditions.
- (ii) Rafting/world cruises.
- (iii) Polar expeditions.
- (iv) Running/trekking across the Himalayas.
- (v) Adventure flights.

Personal risk to life is not a necessary qualification. However, in the event of two undertakings of equal value the person who has incurred the greater risk will be considered to have the greater claim.

When the work of the year has not been of sufficient value or recommendations received too late, the achievement of the previous year may be considered.

Eligibility

(a) Service personnel of Indian Army, Navy and Air Force.

(b) Service personnel of Territorial Army, Reserve Force, Assam Rifles and Militias.

Procedure

Recommendations for first priority cases should be submitted to the Joint Planning Committee (JPC) through the Service Headquarters (Training or Operations) by 30 June, and be accompanied by brief of the reconnaissance or other achievement, sketch and its value for consideration/award. Recommendations for second priority cases may be submitted directly to the USI.

Recommendations of the JPC should reach the Director by 31 August so that these could be included in the Agenda for the USI Council meeting, usually sent out in September/October.

The USI Council would take the final decision in its meeting, normally held in November/December.

Letters to the Editor

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

I

Dear Sir,

The article 'Preparing India for the Threats of the 21st Century' by Maj Maroof Raza, published in your Oct-Dec 97 issue made an interesting reading and should provide some stimulating food for thought for our policy makers. However, I really wonder whether the author's contention that 'if you have a potent nuclear arsenal, you carry clout in world affairs' holds good in the present scenario wherein a nation's economic superiority seems to be the crunch issue and deciding factor in international power play. A nuclear giant like the erstwhile USSR buckled under the strain of its failed economy, afterall. So, for India, the doctrine of minimum deterrence with a declared 'No First Use' nuclear option as advocated by General K Sundarji, PVSM (Retd) in his article in the same issue of the USI Journal, appears to be a better alternative.

Undoubtedly, the Indian Armed Forces of the Twenty First Century will have to be 'lean and mean'. A recent proposal by the Army Chief to downsize the Army and thus save Rs 500 crores which could be utilized to enhance its combat efficiency, is a step in the right direction. But, sadly, the Defence Ministry has taken no decision whatsoever in this regard as yet. But then our bureaucrats - read IAS officers in the Ministry of Defence - are known to love the red tape and hopefully will accept this laudable proposal later, if not sooner.

Yours Sincerely,

5 SIKH LI
C/O 56 APO

Lt Col Sunil S Parihar

II

Dear Sir,

My association with the USI goes back to about 13 years before Independence. One of the few sensible things I did during my army life was to become a life member of the USI when still Second Lieutenant. At that time I was in the distinguished company of the late Field Marshal K M Cariappa, then a Captain, as the only two Indian officers who were then life members of the USI. Perhaps you know that the USI was located at Simla before Independence. There, apart from an excellent library, of which I used to make full use during leave, we had several comfortable cottages, centrally located on the Mall which officers could use for short stays. Unfortunately, after Independence, the powers that be at the time, sold them to the Punjab Government for a song.

It was my dear friend, the late Colonel Pyara Lal who shifted the library to Kashmir House in Delhi and with tremendous zeal was instrumental in starting the project for our own building.

I am a firm believer in the teaching of the Holy Geeta about "nishkam karma" (selfless service). And there is nothing to write about as I did nothing special or extraordinary during my army career except to command my battalion in action during the last war at the age of 31. I commanded 19 and 20 Infantry Divisions and retired at the "ripe old age of 50".

In conclusion, as a very old subscriber of our Journal, may I congratulate you for maintaining its very high standards. Any old impartial reader will confirm that it is as good as it has ever been.

Maj Gen S C Misra

Review Article 1

Preparing India for the Next Century*

WG CDR (DR) NANDLAL JOTWANI (RETD)**

Driven by deep sense of dismay, disillusionment and despondency, Col Ravi Nanda seems to have penned this book with a bleeding heart.

A sane and sensitive mind cannot but feel upset due to the sad, sorrowful and sickening scenario confronting our country : *"a totally marginalised India, a politically unstable India, a den of corruption, a model for students of political science of how not to run a democracy."* Such a scenario makes the author shudder and wonder at his *'own false optimism'* with which he had written about India in 1987.

Yet, the author has not thrown up his arms in complete despair. He is a down-to-earth realist who is struck and moved by his deep *"sense of gloom and despondency"*, and yet he sees the silver line in dark clouds.

Elections for the eleventh Lok Sabha had thrown up a coalition government of 13 political parties that were never mandated to rule : a marriage of convenience! While we go to Press, the election process for the twelfth Lok Sabha has begun and we pray for not being doomed to yet another hung Parliament.] Politics is not only the art of the possible but also it makes strange bedfellows aiding each other, infecting the body politic! The author laments in anguish, *"there is no governance in India"* and wonders if India needed a new Constitution to meet new challenges

Preparing India for the Next Century, By Col Ravi Nanda (Retd), New Delhi: Lancer Books, 1997, pp.380, Rs. 480.00, ISBN : 81-7095-063-5.

**Wg Cdr (Dr) Nandlal Jotwani, is a former Deputy Director of Education and Editor of the *IAF JOURNAL* published by Air Headquarters, New Delhi. He is a Journalist who has been contributing to both the print and electronic media.

which the founding fathers of our Constitution failed to foresee.

It is a sad commentary on our developmental effort that even after 50 years of independence, India has not been able to provide for the basic needs of food, clothing and shelter to nearly 40 per cent of its population that still lives below the poverty line! India enjoys the dubious distinction of producing the largest number of graduates in the world, most of whom have no jobs! The constitutional aspiration of providing free education for all children up to the age of 14 years, is yet to be achieved despite the National Education Policy and plethora of Education Commissions, Councils and Committees! The present illiteracy rate is around 44 per cent in the country.

The process of liberalisation and globalisation of Indian economy has slowed down. The external debt servicing claims 40 per cent of our annual revenue. India's foreign and defence policies, too, are marked by ad-hocism and expediency. The author has discussed these questions at length. He has also suggested remedial action in his book. He has spelt out the purpose of writing the book : *"To put the ills of India in black and white and suggest a remedy is the purpose of this book."*

The author, *inter alia,* suggests :

* Creation of the Population and Development Commission to which each district should be accountable. Population control is indeed an imperative need of the country and the accountability should trickle down to the *panchayat* level, the grassroots base of the hierarchical structure.

* Enacting a law to make education, up to primary level, free and compulsory.

* Creation of the National Security Council for detailed evaluation and planned decision-making to overcome existing ad-hoc approach to the multitude of problems confronting the country.

* Creation of responsive law and order machinery to restore the authority of law and restrain the criminalisation of politics.

One may have to give a deeper thought to some of his suggestions, howsoever well-intentioned, for example : *"Let a Commission be appointed to reorganise India, politically"* or *"Let infrastructure sector be opened to foreign investments* with no *limits on equity."* It is of desirable to open up the infrastructural sector to foreign investment but equity considerations need be addressed to and spelt out in international tie-ups and joint ventures so as to protect the over-riding national interests.

The publication of this book coincides with the celebration of the 50th year of Indian independence. The book is not only informative, enlightening and useful but also very timely and relevant.

The author ought to have devoted more space to give his *vision* of India ushering into next century not only as a nation but also as a global player. At places, the book becomes just a *compendium* of facts and figures drawn from different publications. The vast bibliography appearing at the fag-end and numerous quotations interspersed in the book vouch for it.

While the book is tastefully brought out by the publishers, there are some printing errors, here and there. It is written more in an informative and impressionistic style rather than as a creative work of a profound thinker with a global vision. This was probably necessitated by the imperatives of handling the highly challenging theme, in a lucid and intelligible style. This might also explain excessive repetition of some of the points. The index at the end adds value to the book. The book is reasonably priced. It would be found very useful by the students, scholars, researchers, analysts, thinkers and those who care for the country. It is a must for the institutions and their libraries so as to generate healthy discussion.

It is indeed a matter of joy and pride that a seasoned soldier has so ably and effectively analysed the symptoms, that is, the

prevailing socio-political scenario, diagnosed the malady afflicting our polity and suggested the remedy in lucid and comprehensible style; beaconing to the light at the end of the tunnel. One hopes that the future leadership of India, to whom the book is dedicated, will take India out of morass of poverty, illiteracy, ignorance and disease; and obtain for it a pride of place in comity of nations.

NOTE TO CONTRIBUTORS

Articles on National Security issues 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.

Review Article 2

Pakistan's Criminal Folly in Kashmir*

LT GEN HC DUTTA (RETD)**

In author's words, "there is psychological hurt in the minds of the Pakistani Establishment". The people feel wronged that both Hyderabad and Kashmir have been swallowed by the big bad wolf India, even though Hyderabad was a 'muslim ruler - hindu population' state whereas Kashmir was its opposite. The main theme of the book is that the Truth (significantly, also Jinnah's view) is it was "Pakistan's Criminal Folly" of the tribal invasion which precipitated the State's accession to India by the otherwise dithering Maharaja. Hence, it was not Nehru's cunning or Mountbatten's perfidy or favouritism but the cupidity of Pakistan leaders which sealed the fate of Kashmir. Thereafter to cover their own blunder, the politicians have fed a whole generation of theirs on false propaganda and jingoistic slogans of 'Plebisite', Azadi-Azadi', 'Jehad' and so on. Nonetheless, the author known for his deep convictions and integrity believes in and has worked assiduously for Indo - Pak reconciliation. Accordingly, he sets out a three point theseis : one, Indo - Pak enemity must end as it is wasteful and destructive; two, there is enormous ground swell of desire for reconciliation at people-to-people level; three, in the final analysis it is only the TRUTH which can set the minds of the people on both sides free. The thesis is supported by exhaustive research and great scholarship. It is emphasised that partition is a fact of life, which cannot and must not be reversed .By the same token, it is also not possible to wish away the fact of accession of Kashmir to India and Kashmir's integration into the Indian polity.

The stage management of a massive tribal invasion by Pakistan, barely nine weeks after independence is remarkable for

**Pakistan's Criminal Folly in Kashmir.* By Lt Gen (Dr) ML Chibber, New Delhi : Manas Publications, 1998, pp.247, Rs. 395.00, ISBN 81-7049-095-5.

** Lt Gen HC Dutta is a former Army Commander. He has written a number of articles connected with Defence matters.

daring and decisiveness. However, the larger question is as to why did they opt for a foolhardy venture when a little patience and sophistication would have given them Kashmir anyway. In fact, this adventurist trait stands out as a continuous thread through their history, e.g., military coups within the country, disastrous 'crackdown' in East Bengal in 1971 and recurring intervention in Afghanistan. Their aggressive and violent psyche has specially targetted India foisting on us three major conflicts, a violent insurgency in Punjab and a still raging proxy war in Kashmir. They have been equally venomous on the diplomatic front. In contrast the Indian ethos has been that of reaction, caution and containment. There is a revealing account of Nehru fussing and fretting about logistic and legality of giving military aid to prevent the sack of Srinagar, whereas on 27 October, with tribals failing to capture Srinagar, Jinnah flew to Lahore and asked Punjab Governor Mudie to order General Gracy to use Pak Army to secure Jammu and Srinagar airfields. Obviously, this phenomena of the 'New Pakistan' is something quite different from what we people of older generation would like to believe. This sombre scenario notwithstanding, the author's impassioned plea for Indo - Pak amity need not be faulted for sincerity or realism, for the reality is that tyranny of history has put us next to each other, leaving us only two choices, perpetual war (hot, cold, proxy or whatever) or coexistence. Besides, as practical philosophy, what better way to neutralise the toxicity of a turbulent and troublesome neighbour than to make friends with it.

The masterly historical survey covers vast ground, addressing many subjects of import. "Pakistan was conceived as a homeland for the muslim ... it actually ended up by fracturing of this community in three states." Again, "the largest number continue to live in India... (where) ... They have been suspected, exploited as vote banks ... and have developed a ghetto mentality." This is a complex and emotional issue but the main point is unexceptionable, namely that the large muslim minority has still not been fully integrated into Indian polity. It is against humanism and is poor management, for how can India develop its full potential without full and willing contribution from this talented and industrious community, which can also be of immense help for building

bridges with Pakistan, the Organisation of Islamic Countries (OIC) and the Arabs.

The second grand theme, though of entirely different genre, yet interwoven into the whole with great literary skill is the story of saving of Ladakh and the saga of incredible heroism and fighting qualities of three exceptional men. This part is a sheer delight and reads like a thriller, the author making the narrative come alive in his inimitable style. Brigadier Sher Jung Thapa held on at Skardu for six long months braving great hardship and privations with indomitable spirit. Heavily outnumbered and surrounded by enemy on higher ground, he dug his heels in and refused to budge despite General Thimmaya's advice to withdraw and inspite of all blandishments and coercion by the enemy. He held on, even after the enemy outflanked Skardu and captured Kargil in depth. His dogged defence almost certainly saved Ladakh as it delayed the fall of Kargil till another energetic and resourceful soldier, Major Prithi Chand had time to organise a modicum of defence in Leh.

Major Prithi Chand's doings in and around Leh read like that of a later day Lawrence of Arabia. Single handed with just a handful of Ladakhis, he galvanised the local inhabitants to defend their homes and hearths. Indeed, his indefatigable efforts and amazing resourcefulness as also his conduct during actual operations can form the subject matter of a pamphlet on leadership. His labours gained for India precious time by blocking Pakistan columns advancing to Leh from Kargil and later against a determined thrust through the Nubra Valley before regular reinforcements could arrive in Leh. It is a story of suspense and race against time. The construction of airfield at Leh with improvised means is again a measure of his uncommon zeal and innovation.

Chhewang Rinchen, a 17 years old school boy, the third hero around whom the book is built, emerges as a young man of stark courage and sheer guts. People familiar with the rigorous terrain, high altitude and intense cold of the area of his operation, will readily recognise the realities of his heroism. That the same boy distinguished himself again in operations and rose to the

rank of Colonel is ample testimony of his soldierly prowess. His heroism truely saved Leh because had he failed, the route to Leh lay open as neither Chang La nor Khardang La was held at that point of time.

It is to India's great good fortune that we happened to have three outstanding men at the most crucial time and place; dour and stout hearted Thapa at Skardu; resourceful and ingenuous Prithi Chand in Leh; and natural warrior Rinchen in Nubra Valley; backed by a redoubtable General Thimmaya and the dare devil flier, Baba Mehr Singh. Such men create history for their exploits and shape the destinies of nations. The nation owes a debt of gratitude to these heroes. One wonders if they have been rewarded enough.

In short, an extremely readable and knowledgeable book, grand in sweep and design and a stirring human drama. Indeed, a veritable 'tour de force'.

ERRORS REGRETTED

Reference : The USI Journal, October-December 1997

* On page 514 the article is written by **Col RK Bhonsle** and not Col PK Bhosle.
* On page 558, in the caption "Text of the Reply dated 6 Oct 97 sent to Major Ranbir Singh" the name should read as **Major Ranbir Seth.**
* On page 577 the title, "Nato - Identity Crisis and the American Experiment in Europe" should read as **"NATO in the Post Cold War Era : Does It Have a Future"** Ed by S. Victor Papacosma and Mary Ann Heiss, New York : St Martin's Press, 1995, pp 356, £ 30.00, ISBN 0-333-62659-1.

Short Reviews of Recent Books

Missed Opportunities : Indo Pak War 1965. By Maj Gen Lachhman Singh Lehl, *Dehradun : Natraj, 1997, pp. 364, Rs. 425.00, ISBN 81-85019-62-2.*

It is unfortunate that even after 32 years of the 'Event', the official documents are gathering dust in the archives under the cover of Officials Secret Act. The authors' research is based on the study of books published both by Indian and Pakistani authors, personal notes of the participants, discussions with the field commanders and their staff officers, and his personal knowledge.

The first four chapters give a brief and an interesting account of the role, played by the political leaders, and the British rulers leading to a 'Divide' and in sowing the seeds of hostility. These chapters are significant particularly for the post 1947 generation of officers for comprehension of the background leading to Indo - Pak hostility and the game plans of major world powers.

The study of the Battle of Dograi by 3 JAT and the capture of Hajipur Pass under the dynamic leadership of Lt Col Desmond Hayde and Brig Z C Bakshi, proves that the determined leadership and relentless offensive action can achieve, what otherwise may seem impossible.

The area of 1 Corps operations is a saga of missed opportunities and the failure at higher level. Here 1 Corps achieved practically nothing despite a sizeable concentration of Armour and Infantry. The principles of concentration of force at the chosen point and surprise were grossly violated. The initiative and surprise were allowed to slip away as the war progressed. The worst followed the withdrawal of 1 Armoured Brigade from Phillora on 8 Sept 65 by its Commander. This allowed Pakistanis to reinforce and reorganise their defences at Chawinda resulting in our failure to capture it.

Our reverses during the re-capture of Khem Karan is an example of failure of understanding of tactical situation. The troops were launched into action without preparation, reconnaissance, co-ordination and adequate fire support against the advice of Battalions, and Brigade Commander.

The absence of sound intelligence system, chinks in Army - Air co-operation, understanding of relationship between Defence Services and the Ministry of Defence and a necessity for a formal and integrated Chief of Defence Staff System have been discussed for greater understanding and benefit of political leaders and the bureaucracy.

An often debated question of, who won the 1965 war has best been answered by the author from the quotes of Lt Gen Harbaksh Singh from his book *War Despatches* and Lt Gen Gul Hassan of Pakistan from his *Memoirs.*

"Measured purely in terms of material gains, our achievements have been very modest. We occupied approximately 740 square miles of Pak territory, when it was well within our capability to expand our hold over a far greater stretch of enemy land, Pakistan's fighting potential was considerably whittled down, but so was ours, though to a lesser degree. The enemy armour was only mauled instead of being crippled", Harbaksh writes.

"We delude ourselves that we emerged victorious in our 1965 conflict with India, far from it. All that we attained was to ensure that our adversary did not make telling gains", says Gul Hassan.

The author is complimented for producing *Missed Opportunities* for an unbiased and better understanding of Indo Pak War 1965 by the officers of our Armed Forces and the students of the military history. It will be a very useful addition to the unit libraries.

-- Lt Gen B Joginder Singh MVC, VSM (Retd)

From Antiquity to the Nuclear Age : The Art of the War in World History Edited by Gerald Chaliand, *Berkeley: University of California Press, 1994, pp.1069, $ 75.00, ISBN 0-520-07964-7.*

This anthology has recorded the complete gamut of conduct of war from bow-and-arrow age to the nuclear age. It explores the whole spectrum of strategic thinking. Amongst the galaxy of military thinkers, Chanakya is placed on a high pedestal - with his six-fold dicta. Peace (sandhi); war (Vigraha); neutrality (asana); marching (jana); alliance (samshraya); and making peace with one and waging war with another. The fight between Alexander and Porus; Timur's capture of Delhi and Babur's invasion of India have been dealt with in detail. Porus' elephants proved to be a liability rather than an asset - proving that by relying on elephants in battle, Indians developed elephantiasis! Amongst the great military captains Mahatma Gandhi has also been included with amplification of his doctrine of non-violence that 'non-violence does not mean meek submission to the will of the evil-doer.' A very absorbing book.

-- Lt Col Daljit Singh

The Cambridge Illustrated History of Warfare. Ed. by Geoffery Parker, *UK: Cambridge University Press, 1995, pp. 408, £ 24.95, ISBN 0-521-44073-4.*

The Cambridge Illustrated History of Warfare, despite its obvious Eurocentric approach, is an exceptional effort. Editor Geoffrey Parker, a military historian at Yale University discusses the superiority of the Western way of warfare, a controversial if interesting issue.

The beautifully illustrated volume begins at the Battle of Marathon (490BC) where the Greeks overwhelmed the Persians, and deftly negotiates the centuries right upto the Gulf War where a Western-led coalition defeated Iraq. The

exhaustive maps, the rare photographs and the lucid writing helps readers to breeze through the chapters-from the days of the Macedonian phalanx and the Roman legions; the arrival of gun powder and the conquest of the new world to the age of industrialised warfare of this century.

The reason why the West has been dominant is technology, discipline and an "aggressive military tradition", according to Parker. Parker admits that the Chinese and the Japanese have similar pasts, with Sun Tzu's teachings anticipating Clausewitz's. The "West's unique ability to change as well as to conserve its military practices and its power to finance those changes" gave it the edge, Parker adds.

A highly readable book, and an interesting one, both for the expert and the amateur enthusiast. A must for college libraries.

-- Srinjoy Chowdhury

Exploratio : Military and Political Intelligence in the Roman World from the Second Punic War to the Battle of Adrianople. By NJE Austin and NB Rankov, *London : Routledge, 1995, pp. 292, £ 45.00, ISBN 0-415-04945-8.*

Exploratio is really a follow up on a doctoral thesis on the Roman Empire of Ammianus in the Fourth Century AD. Over the six centuries of military operations of the Roman State, intelligence was integral to political and military art. The authors, through authentic chronicled accounts of the period, highlight how intelligence was gathered in a non-technical age through advanced scouts, prisoners, deserters, rumours and individual competence and ingenuity. The records of the period show that the Roman chroniclers had a strong sense of history. The authors also bring out that though the Romans realised that strategic intelligence involved gathering of information on a long term continuous basis there was no specific distinction between strategic and tactical intelligence.

A book essentially for researchers and academicians. Those unfamiliar with Greek, Roman and Carthaginian history will find the chronology extremely difficult to follow.

-- Air Marshal KD Chadha, PVSM, AVSM (Retd)

The Future of International Relations. Edited by Iver B. Neumann, Ole Waever, *London : Routledge, 1997, pp.380, £ 14.99, ISBN 0-415-14408-6.*

International relations as a discipline came into being after World War I to prevent repetition of similar human tragedies and to find answers to questions of peace and co-operation amongst States.

The introduction to the Volume mentions that the intention was not to talk of international relations in terms of paradigms and schools of international thought as historically expressed by Thucydides. Kautilya, Machiavelli and Hobbes but to discuss them in the context of the 20th Century developments.

The new 'International Relations Masters' question the stereotypes on the bias of their specialist disciplines. Essentially the discussion revolves around co-relations between international relations and international political economy and role of economic power and hegemonism. The consesus is that elements of power cannot be ignored and it is unreal to expect that a world order can be based on morality. It is, therefore, not surprising that the USA views international relations, not as a dialogue amongst equals but on dominance, hierarchy, submission and control. The central paradigm is that State is power and power is State.

The theorists of 'New International Relations' are, as the concluding chapter states "The so called I's as a combination of partially conflicting corporate we's." Thus they represent only threads of views on how traditional thought could be tempered.

Basically this issue of 'New International Relations' series is a text book for students. The book is scholastic and the uninitiated may find that their understanding is somewhat stretched.

-- Air Marshal K D Chadha, PVSM, AVSM (Retd)

The Domestic Bases of Grand Strategy. Ed by Richard Rosecrance and Arthur A Stein, *London: Cornell University Press, 1993, pp. 230, $ 15.35, ISBN 0-8014-2880-7.*

The volume under review is a collection of nine articles by eminent Professors of International Relations and Political Science, grouped into two parts : Theory and Practice.

'Strategy' is traditionally related to the planning and employment of military resources, major campaigns or the war itself. Clausewitz defines war as continuation of policy by other means which implies that war must be pursued with regard to a subsequent peace. Liddell Hart, the noted British strategist expanded the concept of strategy; it is essential to conduct war with constant regard to the peace you desire. "Grand Strategy" represents a more inclusive notion, going beyond mere Generalship in war and combining it with other weapons at the nation's disposal : economic, political and psychological. American thinkers, post World War II, generalised the concept further to include 'deterrence or the prevention of war' during peace: the mounting of a permanently mobilised and invulnerable nuclear force could deter even the most powerful enemy. Thus 'Grand Strategy': domestic groups, social ideas, character of the constitution and economic constraints and other similar factors, play a greater role than mere material power and external threat.

Altogether, an interesting study for students of the evolution of strategy.

-- Late Lt Gen PE Menon

History of the Royal Regiment of Artillery - The Years of Defeat - Europe and North Africa 1939-41. By General Sir Martin Farndale, *London : Brassey, 1996, pp. 383, £ 40.00 ISBN 1-85753-080-2.*

A painstakingly researched and well written history of the Regiment of Royal Artillery. Detailed appendices provide a wealth of information. The "Gunners" recognising their role as one supporting, have described all operations in the context of the infantry battles. The role of the Indian formations and units has also been included.

Of interest is the story of introduction of the Army Air Arm. It was helped by the Artillery officers flying club, and the note by General Ironside the CIGS- "No useful purpose will be served by raising the question whether in principle the Army should have control of Air Force."

Anti Aircraft Artillery - LAA gun defences of London were meager-only 92 guns defended vulnerable points against low level attacks. Searchlights, taken over from the Sappers just before the war, were effective. The Anti Aircraft Artillery was placed under the Fighter Command. During the battle of Britain, on 7 September, 1940. German bombers flew over London for seven hours and caused 1,000 killed .In the dog fights on 15 September, 1985 out of 220 Boche bombers were destroyed.

Operations in the Middle East, have been described very well. The first attack on the Italians started on 9 December, 1940. It was led by 1/6th Raj Rif of 11 Indian Brigade-took only four hours to make them run. Subsequent capture of Siddi Barrani by 4 Indian Division led to the capture of many prisoners. The move of this Division to Sudan, marrying up with 5 Indian Division and the move of 10 Indian Division to Basra, on 17 August,-in terms of the global British operations, are also included.

Excellent photographs illustrate some shortcomings in the equipment - 25 pounders on 18 pounder carriages: 60 pounders with wooden wheels and so on.

Recommended as a reference book.

-- Maj Gen Partap Narain (Retd)

Decent Into Darkness-Pearl Harbour, 1941 : A Naval Diver's Memoir. By Commander Edward C. Raymer USN (Retd), *Novato : Presidio Press, 1996, pp. 214, $ 21.95, ISBN 0-89141-589-0.*

A number of books have been written on the attack on Pearl Harbour by the Japanese on 7 December, 1941 but this book is different and perhaps the only one which describes in detail the most difficult task of raising and salvaging the sunken battleships by a team of dedicated divers, both naval and civilians.

Each of the operations of salvaging the battleships had its own peculiar

problems and challenges but the diving crews with their devotion and skill accomplished their tasks successfully. All these were done in complete darkness with the help of ships' plans. It was horrifying for the divers to see the dead bodies floating around them as also the whales and falling of objects and machinery. The divers worked for fourteen hours a day and seven days a week and nothing could be done to recuperate their nerves subbed raw from the strains of facing the hidden dangers within the ship.

This is an absorbing book of interest to all the naval officers, in particular to the divers who, though used to such difficult tasks, could learn a few lessons.

A good addition to all naval libraries.

-- Cmde RP Khanna, AVSM, (Retd)

Why the Allies Won. By Richard Overy, *London : Jonathan Cape, 1995, pp. 396, $ 20.00, ISBN 0-224-04172-X.*

In this well researched book, the author explains that Allied victory was far from preordained. The title of the Book even provokes the question, 'did they?' With passage of time, it has become possible to argue that the three major allies, the US, Britain and the USSR, actually lost out consequent on their victory. The focus of the Book is to explain the outcome rather than to describe the course. The narrative is, therefore, restricted to those parts of this conflict which the author considered as decisive : the area of combat technology, politics and morale.

The explanation of Allied victory requires a macro view. It was unique in its scale and geographical spread. It was a world battle in its literal sense. There was no question to winning the war in one particular engagement; it had to be won in every theatre and in every dimension, land, sea and air. Each pitched a third or more of their population and converted two thirds of their economy to feed the demands of the front line.

The author has maintained a balance between the war as a series of decisive military campaigns and as a set of distinct themes between how and why the Allies won. The first part of the Book examines the four objectives of conflict in which the Allies prevailed between 1942 and 1945 - the war at sea, the land struggle on the Eastern front, the air offensive and the reconquest of Europe. The second examines and explores the elements that conditioned military successes : the balance of resources, combat effectiveness, leadership and strategic judgement, the mobilisation of the home front, and last but not the least, the moral contrasts between the two warring camps.

Altogether, 'must read' for students of the history of World War II.

-- Late Lt Gen PE Menon

Men Ideas and Tanks : British Military Thought and Armoured Forces, 1903 - 1939. By JP Harris, UK: Manchester *University Press, 1995, pp. 342, £ 14.99, ISBN 0-7190-4814-1.*

Silent revolution in warfare since the Napoleonic wars got a cognisable boost with the debut of armoured tank and the combat aircraft in European battle fields of the Great War of 1914-18. Britain maintained its lead both in tank technology and tactical employment of this war-machine at the battles of Cambrai, Ypres or Flanders. However, the tank could not break the stalemate of trench warfare .Heated debates on the role of tank corps - attrition versus battles of surprise and policy vacillations on priorities in production between artillery, combat aircraft and tanks, raged between Fuller, Winston Churchil and Haig.

Men Ideas and Tanks is a gripping and wholesome review of the stages of development of the early combat tank, its war record during 1916-1918, and the vociferous controversy between its protagonists and pro-horsed cavalry conservatives, between military intellectuals and field commanders and even freelance military commentators in Britain. The profusion of futuristic tacticians and the concepts expounded by them - Fuller, Liddle Hart, Lindsay, Charles Broad Percy Broad and others depict the virulent ferment pertaining to tank warfare, during the period 1919 to 1935.

The Book is an interesting and thought-provoking review of why and how Britain gained and lost initiative in armoured warfare before the Second World War.

-- Maj Gen SK Talwar (Retd)

Plotting Hitler's Death : The German Resistance to Hitler, 1933-45. By Joachim Fest, *London : Weidenfeld & Nicolson, 1996, pp. 420, £ 20.00, ISBN 0-297-81774-4.*

Immediately after the Second World War, when the world at large got know the horrors perpetrated by Hitler and his cohorts, a number of books were written by Germans who had opposed Hitler. But these books, at least initially, were limited in their scope due to the close proximity to the end of the War. Germany was a confused nation and many believed that any plot to overthrow a legitimate government would tantamount to treason.

Right from the time Hitler came to power, and the way he achieved it "with a mixture of corruption, backstage intrigue and patronage", as Count Harry Kessler put it, resistance to him appeared. As Hitler grew more powerful and his venal side became apparent, this resistance which was purely political, spread into the German Army. Many plots were hatched but they all failed either due to Anglo-French surrender, such as at Munich, or failing to take action when Hitler forcibly took Czechoslovakia. The plotters sent emissaries to Britain requesting a tought line against Hitler. They were either disbelieved or ignored.

It is fortunate that German Army officers such as Count von Stauffenberg, Hans Oster and Henning von Tresckow, who all paid for their actions with their lives, did maintain their staunch opposition to Hitler which ultimately resulted in the 20 July 1944 explosion which almost succeeded in killing Hitler. This and other plots have been vividly described by the author, which makes fascinating reading. Highly recommended.

-- Cdr S Varma SC (Retd)

Tanks-Main Battle Tanks and Light Tanks. By Marsh Gelbart, *London : Brassey Modern Military Equipment, 1996, pp. 160, £ 15.95, ISBN 1-85753-168-X.*

Anti Tank Weapons. By John Norris, *London : Brassey Modern Military Equipment, 1996, pp. 143, £ 15.95, ISBN : 1-85753-177-9.*

Since the advent of tanks there has been a stiff competition between the tank and its destroyers. As each improves the other tries to catch up in a never ending exercise. Since the two weapon systems are an essential part of modern warfare, it is imperative that there should be reference literature on both for the military planner. It is here that Brassey's have done great service to bring out these reference books on a regular basis.

The tank book is divided into two parts, one dealing with main battle tanks and medium tanks and a separate part dealing with light tanks. All the tanks in service in the Armed Forces have been listed country-wise for convenience. Since the tank is a decisive element in land warfare, each has been critically examined for its speed and manoeuvrability, fire power and armour, the three essential but competing requirements in the design of a tank. It is the fine balance between these three, that makes a particular tank superior to its counterpart.

The advancements made in the armour plating and the guns have been examined in details as has been engine design, where the author has given the horsepower ratios of all the tanks listed .The service status and performance figures make this book essential for the planner. The chequered history of our own Arjun MBT makes for interesting reading from its initial design to its extremely sluggish progress. It may yet not go into full production.

All anti-tank weapons are covered, from shoulder fired to remotely controlled. Airborne weapons and the latest state-of-the-art 'fire and forget' weapons are included. Armoured Fighting Vehicles (AFVs) are also included as weapons from the Second World War that are still in the inventories of some nations. It is, therefore, surprising that no mention is made of India, as if it had no anti-tank weapons in its armory, indigenous or imported.

The author has included a very interesting section dealing with the future positions of anti tank weapons. The British Merlin system using a tank chassis

with an elevating platform where weapons and detection systems are located, has been included. This system is still under trials. Anti tank mortars which come down vertically on top of the tank are included.

These excellent books are an absolute must for any Defence library.

-- Cdr S Varma SC (Retd)

The Origins of Modern Freedom in the West. Ed. By R.W. Davis, *Stanford C.A. : Stanford University Press, 1995, pp. 384, £ 35.00, ISBN 0-8047-2474-1.*

The contributors of this compilation address the economic and social factors leading to the development of freedom and liberty in Europe and the West. In the early period, emergence of nation-states gave rise to increased interactions between neighbours and the evolution of trade mechanisms, codes of conduct and property rights. The Greeks developed the idea of freedom keeping in view two aspects - a state was free if it was not ruled by a despot and was free from foreign domination. From *Polis* (city–state) emerged the ideas of citizenship, formulation and enforcement of law, taking decisions on war and peace, and all these were arrived at through dialogue and acceptance of rational conclusions. Thus, a free man was one who was "politically the master of his own destiny, was a citizen, an integral part of the community competent to decide its own aims". Martin Ostwald quotes Herodotus in terming a people to be free when they are not ruled by a single potentate or dominated by an alien power. However, such freedom was circumscribed by an objective social norm. The Greeks also mooted the idea of freedom of speech, non-interference in the affairs of a weaker state and the ability to play a full part in the life of a society as a whole. Brian Tierney highlights the struggle between the Church and the State which prevented rulers from becoming absolute theocratic sovereigns and further elaborates that legitimate ruling authority came only from the consent of the people.

13th Century AD saw advent of parliament, representative government, the House of Commons and natural rights to own property, acquire necessities of life, self defence, marriage and due process of law.

HG Koenigsberger, in his contribution, deals with the concept of actual representation and the signing of the Magna Carta which outlined the rights and privileges and the rule of law. As the clergy and feudal lords were equally important in the affairs of the state, the Upper House or House of Lords came into being.

From the 13th to the 17th Centuries further improvements to freedom were formulated, ie, everyone was subject to the law of the land, even the king, independent judiciary, common law, religious tolerance and freedom of expression. WJ Bouwsma writes about the Machiavellian concept of liberty, separation of powers and social equality. Donald R Kelley gives his views on kingship and

the royal counsel, and resistance to kingship. He quotes, "no sacrifice is more pleasing to God than the death of a tyrant". And, as the prince was created by his subjects, the role of parliament became paramount.

An interesting contribution to modern concepts of freedom, liberty and democracy.

-- Col Valmiki Katju (Retd)

America, its Army, and the Birth of the Nation 1794. By Dave R. Palmer, *Novato : Presido, 1994, pp. 290, $ 14.95, ISBN : 0-89141-561-0.*

The author has focussed on the emergence of the United States and the defence needs of a conglomerate of States that had fought for freedom and were in the inception stage of welding into a nation. With little co-operation for the pauper central authority from the States having diverse attitudes and interests, mutinous conditions among the soldiers who fought for the freedom and were not paid, threat from the inhospitable Indian tribes, presence of belligerent British and Spanish Armies around and maritime commerce made impossible by sea pirates from Morocco and Algeria, it was an uphill task not only to establish central authority but be also prepared to meet imminent internal and external threats posed in plenty at that point of the history. The inheritance of British background was reminiscent of the dark era of Cromwell's reign and it was a continuous damper for raising a standing Army and its command and control by a central authority.

The author unravels the above conditions in an absorbing story. He has potrayed the vision, courage, confidence and steadfastness of George Washington in the production of the Constitution for the Nation as well as preparing to meet the forseable internal and external adversaries. The culmination of prolonged confabulations against harsh opposition for decisions on authority to declare and end wars, need and role of a standing Army, the role of the States' militia and its use at state and central levels, the command of troops against internal and external threats has been described with the expertise of a soldier and historical accuracy of a scholar.

The book makes an interesting reading for civilians and soldiers dealing with the Defence matters and the use and control of Defence Forces including paramilitary forces for meeting external and internal threats.

-- Brig Satjit Singh, AVSM, VSM (Retd)

Savage Peace : Americans at War in the 1990's. By Daniel P Bolger, *Novato : Presidio Press, 1995, pp. 420, $ 27.95, ISBN 0-89141-452-5.*

After the end of Cold War and dismantling of the Berlin Wall, many imagined that world peace had finally arrived. But it has not turned out that way.

This book written by a serving professional soldier, tackles the thorny subject of 'peace keeping'. The book covers the American involvement in the Ninetees, in what RUDYARD KIPLING called the 'savage wars of peace'. There has been a profusion of US involvement. The list includes Cambodia, Haiti, Bolivia, Peru, Western Sahara, Rwanda, Panama, Iraq plus many more .While each case merits consideration, this book focuses on the largest forays into the ill-defined realm of peace operations, e.g. success in Kurdistan, failure in Somalia and a stalemate in Yugoslavia. As India is also involved in 'peace-keeping' operations, at the behest of the UNO, it figures in this book repeatedly. It also includes important statistics, which enhances the value of the book.

An interesting and thought provoking volume dealing with a subject currently in the news and more likely to be so, in the future.

-- Maj Gen Ram Nath, SM

Presidents' Secret Wars : CIA and Pentagon Covert Operations From World War II Through the Persian Gulf. By John Prados, *Chicago : Ivan R., Dee Publisher, 1996. Revised and Expanded, pp. 572, $ 17.95, ISBN 1-56663-108-4.*

One is likely to discount views in the media of 'foreign hand' in the domestic affairs of our country. Similarly espionage related news e.g. Col O North or the shooting down of U2 Spy aircraft receives scant attention. The general public is naive enough to believe that the principles of 'Panch Sheel' and non interference are scrupulously followed by governments. But the brutal fact is that since World War II, great powers, for their own selfish ends, have been waging secret wars or covert operations with impunity.

This book is an eye opener. It covers the covert operations of USA intelligence agencies, based on declassified official documents and public record and covers the period from World War II to the crisis in the Persian Gulf in the Ninetees. The book makes fascinating, though frightening reading about the way Presidents of the USA, the CIA and other intelligence agencies, plus the Pentagon, have shamelessly and without consideration of human rights, democratic principles or basic norms of decent behaviour, repeatedly interfered in the internal affairs of sovereign countries, including assassination of world leaders, who were a hinderance to their designs. Thus they attempted to alter the destinies of nations and course of world politics to their advantage. The book also highlights the large CIA presence in India and the strong reservations on its activities expressed by Ambassadors Chester Bowles and Galbraith.

The book is well researched and the contents expressed in a lucid and simple manner. However, excessive mentioning of names, of even minor functionaries is an unnecessary distraction. The book will be a useful addition to any library.

-- Maj Gen Ram Nath, SM

Dirty Tricks or Trump Cards : US Covert Action and Counter Intelligence. By Roy Godson, *Washington : Brassey's, 1995, pp. 337, $ 24.95, ISBN 1-57488-034-9.*

US oovert action is influencing events in other parts of the world without revealing or acknowledging involvement. Counter-intelligence is identifying, neutralizing and exploiting the intelligence activities of others. Counter-intelligence protects a state's secrets from the prying eyes and ears of adversaries. Whereas secret action implies hidden; covert action means disguised. This book proves that like in bridge, in national security, one peep is better than two finesses. Ironically, the security of USA is threatened by her own 'moles' in her security set-up.

-- Lt Col Daljit Singh (Retd)

US-Israel Relations at the Crossroads. By Gabriel Sheffer, *London; Frank Cass, 1997, pp 242, £ 32.50, ISBN 0-7146-4747-0.*

The US-Israeli relationship has been vital and enduring conditioned heavily by a combination of political, strategic and domestic factors in the USA. Israel has been US's strategic outpost in the Middle East - both during the Cold War era and as an ally in a region perceived as anti-US.

The end of the Cold War, the changing contours of the Arab World and the attitudinal changes in Israeli domestic politics has brought this relationship at the cross-roads. The book is a compilation of fourteen essays by distinguished US and Israeli scholars covering the political and strategic issues and an analysis of how American Jews view the Middle East scene.

Conclusions are that in the post Cold War era, Israel's strategic importance will be vital for the USA in terms of oil, security and threats to US interests from nuclear and missile proliferation. Significantly on Israel's nuclear weapons capabilities, the conclusion is that the USA will continue to refrain from exerting pressure on Israel to sign NPT. Israeli denuclearisation will not be allowed to be made an issue in the Middle East peace talks and arms control. The increased security risks that Israel may have to shoulder as part of the Middle East peace proposals, calls for its existential nuclear deterrence to be in place.

A useful book on Middle East perspectives.

-- Dr Subhash Kapila

Britain, Southeast Asia and the Onset of the Pacific War. By Nicholas Tarling, *London : Cambridge University Press, 1996, pp. 433, £ 45.00, ISBN 0-521-533-46-6.*

This book narrates the predicament of Britain with the onset of war in Europe in 1939. Being busy with Germany, Britain wanted to contain Japan to avoid war in the East. She tried to coerce USA to block Japan's expansion in Southeast Asia. Having failed to divert US policy against Japan, she tried to

improve her relations with other Southeastern countries like Netherlands, East Indies, the Phillipines, French Indo-China and Thailand. This book reveals how diplomacy may be used to subdue a potential enemy.

-- Lt Col Daljit Singh

Security and Arms Control in Post-Confrontation Europe. By Jenonne Walker, *Oxford : Oxford University Press, 1994, pp. 182, ISBN 0-19-829176-0.*

This book written by Jenonne Walker for the Stockholm International Peace Research Institute is the sixth in their series "Strategic Issue Papers". Jenonne Walker is well qualified for the task; her appointments and experience in European affairs as well as the holistic approach of US intellectual thinking clearly leave their mark on this book which focusses sharply on the issue of arms control in a changing European order.

The main text and its Appendix occupy roughly equal print. The Appendix details the documents which provide the empowerment, purpose, definitions and the signatory countries to the various treaties and the setting up of, and modifications to various institutions which serve the aims of arms control through cooperation in security and confidence building measures in the North Atlantic alliance as well as the Western European Union.

The main text of the book analyses the post Cold War scenario in Europe and the views of both big and small countries on both sides of the erstwhile Iron Curtain. The author displays a deep understanding of the European community and its evolving strategic perceptions.

An outstanding book which brings out the mood and atmosphere in which arms control in Europe can be viewed and exercised and which can hasten the process of political change already set in motion, but is realistic enough to show that the driving force in these attempts is the strategic vision.

The book is recommended for inclusion in all staff colleges and institutions of higher study in the Services and the Ministry of External Affairs. A book to be read and digested - and its methodology adapted to suit subcontinental wisdom, vision and realism - by all those who have a hand in shaping the regional destiny of the subcontinent, and in particular by the Indian strategic community.

-- Cmde RP Bhalla (Retd)

August 1944 - The Campaign for France. By Robert A Miller, *Novato : Presidio, 1996, pp. 280, $ 14.95 (Pbk), ISBN 0-89141-594-7.*

By the end of July 1944, the Allied forces had successfully established a foothold over Normandy beaches against stubborn resistance by Germans. The situation was still precarious and vulnerable to main Panzer forces. Except a

damaged Cherbourg port, vital build up of men and material was still over make-shift harbours.

During August, however, not only this build up was gradually progressed, but simultaneously, the 12 (US) Army Group under General Bradley was launched on diverse manoeuvres and strikes across France even as its formations were still disembarking on French soil. Bold and often reckless, these turned into a classic pursuit campaign of unparalleled magnitude - in force level as well as dimension.

Miller has meticulously chronicled the day-to-day course of the Campaign alongwith rational examination of battle situations and perceptions of opposing commanders. The narrative lucidly describes the dramatic changes in strategy, opportune regrouping and tasking of formations by Allied commanders on one hand and, on the other, the desperate efforts by German military command, to stem the tide and even launch counter-offensive under unrealistic directives from their Feuhrer. Unified Allied Command as manifest in this campaign, Command rivalries and projection of the strength and weaknesses of senior military leadership - British, American and German are other interesting projections emerging in this enthralling story.

-- Maj. Gen SK Talwar (Retd)

UK Eyes Alpha : The Inside Story of British Intelligence. By Mark Urban, *London : Faber and Feber, 1996, pp. 326, £ 16.99, ISBN 0-571-17689-5.*

In this comprehensive examination of the structure and performance of British Intelligence network and its contribution to British diplomacy during the last three decades, the author explicitly highlights the expanding horizon of intelligence and counter-espionage assignments. The British agencies are spread out into diverse fields - from Cold War and clandestine nuclear or biological arsenals to drug trafficking. Drawing on the extensive resources of American agencies, as well as its own field operatives and Signal Intelligence, British analysts of the Joint Intelligence Committee and the Defence Intelligence staff scored some cognitive successes.

Though rather involved and complex, the book offers a useful review of successes and failures of British Intelligence.

-- Maj Gen S K Talwar (Retd)

Britan's Triumph and Decline in the Middle East : Military Campaigns 1919 to the Present Day. By William Jackson, *London : Brassey's, 1996, pp. 184, £ 30.00, ISBN 1-85753-123-X.*

Strategically located, the Middle East has been the most volatile region in the world and of great importance to the British Empire. During the Twentieth Century, it has seen many conflicts including two World Wars. Britain's strategic

interests in the first half of this Century lay in the safety of her imperial communications with India, the Far East and Australasia as also the need of cheap oil of the region. This led her to seizing and holding the region to fend off successive challenges of Russia and Germany.

The map of the Ottomon Empire was redrawn at the conclusion of the First World War. Debilitated by the losses caused by the two World Wars, Britain's will and capacity to rule weakened and an inevitable political and economic decline began. The vacuum was filled by the United States who played a major role in the region after the Second World War. In the Cold War era, successive US administrations played a dominant role in the affairs of the region.

Rich in detail, this book gives a fascinating and brief account of the British military campaigns in the Middle East in the Twentieth Century. It charts a century in which Britain enjoyed victory in two World Wars but suffered the collapse of the Empire and the previous world order. The author should be complimented on producing such a concise account. Must for all students of Military History.

-- Maj Gen Prem K Khanna, MVC (Retd)

Balkan Babel : The Disintegration of Yugoslavia from the Death of Tito to Ethnic War. 2nd Edn. By Sabrina Petra Ramel, Boulder, Colorado : Westview Press, 1996, pp. 321, $ 19.95, ISBN 0-8133-2559-5

The book has been updated, is a revised edition, tracing the disintegration of Yugoslavia after the death of Tito till the start of the ethnic civil war which is still simmering inspite of the efforts by the UN. It is argued that political dynamics are reflected in, and even adumbrated by changes in the cultural sphere and that the religious sphere underpins and legitimizes actions and decisions taken in the political sphere.

The author gives an insight to the factors that led to the disintegration of a unified country though with diverse ethnic cultures and religions. A country which under Tito was able to defy the imposition of Russian communism. The Interesting part is that cultural diversity among the nationalities of Yugoslavia had frequently been so acute with a tendency to underestimate the element of diversity within each nationality, for example Serbs of the Hapsburg Monarchy and those who were under the Ottoman Empire, were culturally and linguistically very different.

A lesson for us, The old "slogan" of Unity in Diversity, started in the Nehru era, has to be given a re-think by our leaders - can we afford too much diversity?

-- Brig Y P Dev (Retd)

Balkan Odyssey. By David Owen. *London : Indigo, 1995, pp. 436, £ 8.99, ISBN 0-575-40029-3.*

Balkan Odyssey is not the story of the last explosive decade of this tinderbox, not the story of the fratricidal massacres but David Owen's efforts to solve the tragedy that is the Balkans.

It is a first-person account of a man, a former British Foreign Minister, to bring peace to an area which has revived memories of the Holocaust. It is an interesting account, full of painstaking details, but with little drama of the extremely sensitive negotiations, Dr Owen, Cyrus Vance, former US Secretary of State and Thorvald Stoltenberg carried out with the Serbs and their Allies, the Croats and the Muslims. He admits making errors of judgement, he is critical, at times, of the USA and countries of the Western Europe.

Diplomacy is rarely dramatic spur-of-the moment decision-making, it is more often, hours of difficult negotiations and compromises. And that is what Dr Owen's Balkan Odyssey reflects. Recommended as interesting reading.

-- Srinjoy Chowdhury

The Arab World After Desert Storm. By Muhammad Faour, Washington DC.: USIP, 1995, pp. 161, $ 24.95, ISBN 1-878379-31-3.

The Collapse of the Soviet Union left the USA free to pursue its objectives in the Middle East, unhampered by rival superpower opposition. The Gulf crisis of 1990-91 improved the scenario for the USA even further. Iraq was crippled militarily and economically. Saudi Arabia, Kuwait, Jordan and Yemen suffered heavy financial losses. Even though Egypt was rewarded with a very substantial writing off of its foreign debts, all the US friendly Arab States of the region emerged even more dependent on US support. Ignoring the Damascus Declaration, oil rich Kuwait, Bahrain and Qatar sought security by concluding pacts with USA. The military balance was tilted sharply in favour of Israel. Arab dreams of Pan Arab solidarity and of achieving military parity with Israel as a prelude to recovery of lost territories lay shattered.

'The Arab World After Desert Storm' incorporates the results of research covering six important Arab countries viz Iraq, Kuwait, Saudi Arabia, Jordan, Egypt and Algeria. In his concise, insightful and highly readable presentation, Professor Muhammad Faour has focused on (1) The human and economic costs of the Gulf War (2) Trends towards political liberalisation. (3) The decline of Pan Arabism and the rise of political Islam (4) Inter Arab relations. The author concludes that while the Arabs are now desirous of a negotiated settlement of the Arab Israeli dispute, it is the responsibility of the USA and its Allies to work out a solution which will be acceptable not only to the rulers of the Arab States but also to the Arab people. Failing that, popular discontent led mainly by Islamic militants will not only halt the peace process but also destabilize the region.

-- Mr. J P Sharma

No End Of A Lesson - The Story of Suez. By Anthony Nutting, *London : Constable and Company Ltd, 1996, pp. 194, £ 9.95, ISBN 0-09-476820-X.*

The author was a Minister of State in the British government foreign office at the time of the Suez Crisis in 1956. The "Drama" actually started with the dismissal at two hours notice of General Glubb the Chief of Staff of the Arab Legion in Jordan. British held President Nasser of Egypt personally responsible for this dismissal and wanted him destroyed so that they could alongwith France completely control the Suez Canal company and the Middle East Oil. Something similar to the American action against President Saddam Hussain in the Gulf War in 1991 when thousands of civilians were killed and human rights violated.

The next stage was the withdrawal of loan by the UK and the USA of three million pounds (E) for the building of the Aswan Dam; similar to the embargo against Iraq. Nasser nationalised the Suez Canal company, promising to compensate the member nations.

Opposed by India, Russia and some other countries, UK and France armed Israel and goaded her to attack Egypt through the Sinai and control the Suez Canal by capturing Port Said and Ismalia - the first of the Arab-Israel war. On 31 October and 1 November 1956 British planes also bombarded Egyptian air bases and the civil aerodromes causing casualties to thousands of civilians.

A very well written book which narrates the story of what happened in 1956. Russia was the gainer in the eyes of the Arab nations. Saudi Arabia broke off diplomatic relations with both UK and France and placed an embargo on Arab oil supplies to those countries. The author ended his brilliant career by resigning from the foreign office–wish we had a few more like him in the Western World.

Though Israel was forced tc withdrew from Egyptian soil, they are still illegally occupying Arab land - the Palestine crisis still remains unsolved.

-- Brig Y P Dev (Retd)

Heisenberg Probably Slept Here. By Richard P. Brennan, *New York : John Wiley & Sons, 1997, pp. 274, $22.95, ISBN 0-471-15709-0.*

An interesting book by Richard Brennan. Starting with Newton in the Seventeenth Century as a base, the author has covered the lives, times and ideas of seven great Physicists of the Twentieth Century. Einstein, Max Planck, Rutherford, Bohr, Heisenberg, Feynman and Gell-mann have been covered along with their thrust areas of work in physics, impact of their discoveries on society and how the understanding of the universe has improved with their ideas.

The author does not dwell on mundane details but has painstakingly interwoven the personal traits and lives of these men with their work. He has

tried to present their ideas in a form and language, which is very easy to comprehend.

Newton hid his calculations for 21 years and only when he was confident, did he disclose it to the world. Einstein had a mania for work, which drove him to a nervous break down. However, he is one man who has forever changed the way we think about the universe by introducing the concepts of curved space and time dilation. The scientist's scientist as Max Planck is known, will be remembered for his two major discoveries, quantum physics and Albert Einstein!

Neils Bohr and his favourite student Heisenberg broke apart their 20-years-old friendship during just one walk in the woods. The cause, of course, was the atom bomb being attempted by the Germans. In this complete saga only Bohr proposed an open nuclear world while all the others latched on to the Manhattan project. (Heisenberg was stuck with a futile German effort).

The author has been able to bring out the personalities of these great scientists and discuss their highly complicated theories in an easily readable text. In fact his description of quarks is perhaps the best way for a layman to understand the model of the fundamental particles constituting the universe.

A book which is worth reading by all.

Cdr S Kulshrestha

The Princely Sailor : Mountbatten of Burma. By Vice Admiral Sir Ian McGeoch, *London : Brasseys,* 1996, pp. 285, £ 19.95, ISBN 185-753-1612.

The author is to be congratulated for his research describing in detail the life of a renowned sailor who rose to great heights as a naval officer, Supreme Allied Commander South East Asia, the Viceroy and then the Governor – General of India. His love for sea was so much that he sought the assurance of Attlee that he would be sent back to sea after his assignment in India was over. He did go to sea as a Rear Admiral.

The book is of interest to people in all walks of life in particular the naval officers who would learn many lessons from his ability to command ships and men. The politicians could learn a few lessons from his tact and patience to tackle the most difficult task of the transfer of power to the Indians.

A good addition to all libraries and recommended reading for all naval officers.

Cmde R P Khanna, AVSM (Retd)

Volcano Under Snow : Vo Nguyen Giap. By John Colvin, *London : Quartet Books, 1996, pp 336, £ 22.50, ISBN 0-7043-7100-6.*

The book is a detailed account of Vo Nguyen Giap, the supreme military commander of North Vietnam. In a short introduction to his formative years, John Colvin profiles the transformation and rise of Giap from a scholar to a revolutionary, a tactician and strategist with no formal training in the art of warfare, from a meek youth to a vengeful anti-imperialist. Having read Marx, Engels and Lenin, he crossed over to China to study military and political aspects of insurgency under Mao's PLA. Under Ho Chi Minh he learnt about strategic alliances-joined hands with Chinese, French and the USA against Japan, declared independence when Japan capitulated, inducted into his army Japanese rebels, declared French as colonialists and aggressors and later took full advantage of Chinese and Soviet military aid against the US for according to him, "history knows no scruples and no hesitation".

Giap realized early the necessity of building large guerrilla zones, regional mobile forces, all culminating in the main force or regular army and his strategy of a protracted war with "a stage of contention, a period of equilibrium then a counter-offensive" proved very effective. Dien Bien Phu was the culmination of this strategy which not only brought victory against an entrenched garrison but the complete destruction of France's will to continue the war.

The author highlights the change in Giap's strategy when confronted with a super power, USA. His plan to attack South Vietnamese cities (not the important ones like Saigon and Hue) in order to move the ARVN (South Vietnamese forces) to their aid, dominate rural areas vacated by them, and then launch offensive in key areas for maximum destruction of the opposing forces, worked with precision. The mounting losses of US forces, low morale and desertion of ARVN and adverse public opinion at home forced the US Congress to cut off all funds for Vietnam on June 30, 1973. In March 1975, US and its Allies suffered their biggest defeat at Ban Me Thuot and on April 30, 1975 Saigon fell.

It is a superb and impartial account of the war in Vietnam. Specific area maps of important engagements would have been of great help to the reader.

-- Col Valmiki Katju, (Retd)

Additions to the USI Library for the Quarter - Ending March 1998

(The books reviewed in October-December 1997 issue have been added to the Library during this quarter but not shown in this list)

Ser No.	*Author's Name*	*Title*	*Year*
		Afghanistan	
1.	Sreedhar and Mahendra Ved	The Afghan Turmoil : Changing Equations	1998
		Autobiography/Biography	
2.	Chopra, Pushpinder Singh	1947 : A Soldiers Story - From the Records of Maj Gen Mohindar Singh Chopra	1997
3.	Khanduri, C B (Brig)	Meri Dilli Meri Shan	1997
4.	Kalam, Abul	Subhash Bose : Strategic Concepts and Diplomatic Thought	1997
		Civil-Military Relations	
5.	Shafqat, Saeed	Civil Military Relations in Pakistan -- From Zulfikar Ali Bhutto to Benazir Bhutto	1997
		India - Army	
6.	Fay, Peter Ward	The Forgotten Army : India's Armed Struggle for Independence 1942-1945	1994
		India-Culture	
7.	Singh, K S (ed.)	People of India (24 Vols)	1996
		India - Economy	
8.	Ahluwalia, Isher Judge and Little, IMD (eds.)	India's Economic Reforms and Development : Essays for Manmohan Singh	1998
		India -- Foreign Policy	
9.	Foreign Service Institute	Indian Foreign Policy : Agenda for the 21st Century (Vol. I)	1997

10. Naheed Murtaza	Parliament and Foreign Policy : Reflections on India-China Relations	1998
	India - Nuclear Policy	
11. Srikant Paranjape	Parliament and the Making of Indian Foreign Policy : A Study of Nuclear Policy	1997
	India - Religion	
12. Copley, Antony	Religions in Conflict : Ideology, Cultural Contact and Conversion in Late Colonial India	1997
	India - History	
13. Gupta, Partha Sarathi	Towards Freedom : Documents on the Movement for Independence in India 1943-1944	1997
	India - South Africa	
14. Jasjit Singh (Air Cmde) (ed.)	South Africa - India : Strategic Partnership	1997
	International Relations	
15. Kalia, D R	The Emerging Great Powers : Their Potential Prospects	1997
	Maritime Strategy	
16. Menon, Raja (Rear Adm.)	Maritime Strategy and Continental Wars	1998
	Military Operations	
17. Jaiswal, N K	Military Operations Research : Quantitative Decision Making	1997
	National Security	
18. Prasad, Rajendra (ed.)	Perspectives on Security : National and International	1998

Reference Books

19.	Shashi, S S	Encyclopaedia Indica (35 Vols)	1996
20.	Grover, Verinder (ed.)	Encyclopaedia of SAARC Nations (Vol. 4 to 7)	1997
21.	Williamson, John (ed.)	Jane's Military Communications (18th ed.)	1997-98
22.	Foss, Christopher F and Gander Terry J	Jane's Military Vechicles and Logistics (18th ed.)	1997
23.	Foss, Christopher F	Jane's Armour and Artillery (18th ed.)	1997
24.	Sharpe, Richard (Capt, R N)	Jane's Fighting Ships (100th ed.)	1997-98
25.	Gander, Terry J	Jane's Infantry Weapons (23rd ed.)	1997-98
26.	Cullen, Tony & Foss Christopher F	Jane's Land Based Air Defence (10th ed.)	1997-98
27.		Manorama Yearbook	1998

Regimental - History

28.	Khanduri, C B (Brig.)	A Re-Discovered History of Gorkhas	1997

SAARC

29.	Madan, D K (ed.)	SAARC : Origin, Development and Programmes (From First to the Ninth SAARC Summit)	1997

South Asia

30.	Subrata, K Mitra and Lewis, R Alison (eds.)	Subnational Movement in South Asia	1997

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

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